



The Great
Cottonseed Industry
OF THE
South

LUTHER A. RANSOM

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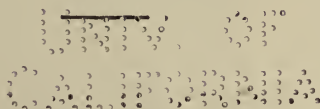
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THE GREAT COTTONSEED INDUSTRY OF THE SOUTH

BY

LUTHER A. RANSOM

Ex-President The Inter-State Cottonseed Crushers'
Association



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TO THE
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THE GREAT COTTONSEED INDUSTRY OF THE SOUTH

PUBLISHERS' NOTE.

In June, 1910, the *Oil, Paint and Drug Reporter* requested the late Luther A. Ransom, of Atlanta, Ga., one of the most prominent men in the Cotton Oil Industry in the United States, who was an ex-President of the Interstate Cottonseed Crushers' Association, to prepare an article on the cottonseed industry for publication in that paper. On July 18 Mr. Ransom wrote that the article which he had been working on during his spare time had grown to the dimensions of a book, and stated that he believed the subject of the great cottonseed industry of the South, treated purely from a historical and industrial standpoint, ought to be of general interest to the public, and at his request the *Oil, Paint and Drug Reporter* undertook the publication of this book. On September 19 Mr. Ransom wrote a letter discussing certain mechanical features of the book, which had not definitely been decided upon. At that time the complete manuscript was in our hands. On September 20 we received information of Mr. Ransom's sudden death, which occurred on the 19th.

The arrangements which Mr. Ransom had made for the publication of his book, just before his death, have been carried into effect by the publishers. The book is now

*THE GREAT
COTTONSEED INDUSTRY
OF THE SOUTH*

offered to the public and to that wide circle of friends and business associates of the late Luther A. Ransom, who did so much to build up an industry which is becoming a great factor in the industrial development of the South, in the hope that it will bring to the attention of the Southern people the fact that, in the cottonseed industry, they have an opportunity for making their section of our country more prosperous. And in increasing the prosperity of the cotton belt, this industry will aid the whole country, for it is not only bringing foreign gold to our shores, but it is supplying to all the people pure and wholesome food products at a lower cost than the other foods which it replaces. And in these days, when the high cost of living is a most serious problem, anything which affords relief is welcomed as a blessing. If this book will encourage the farmers to raise better seed, the crushers to produce better and purer food products and better feed for cattle, if it will encourage the Southern farmers to raise more cattle, feeding them the rich foods stored up in the cottonseed, and if it will induce people to overcome their prejudices and eat the wholesome and delicious cottonseed salad oils, hogless lards and oleomargarines, then will the purpose of the book have been accomplished, and the people of this country might well rise up and call the memory of Luther A. Ransom blessed.

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THE GREAT COTTONSEED INDUSTRY OF THE SOUTH

PREFACE.

The Cotton Oil Industry of the South is unique. It is unusual and without a parallel. Its progress and development has been as brilliant as it has been useful. The field that it opened for the investment of capital has been a most attractive one, although it has not always been a profitable one for the investor. But the opportunities it has afforded for industrial improvement, thus promoting the general good of the country, has been unequalled.

The student of political economy is fascinated by the possibilities of a proposition that, starting out with a raw material practically without value, converts it, in twenty years, into products worth one hundred million dollars. Large sums of money have been necessary to bring about this condition. A few of the things it has accomplished has been to increase the transportation business of the country, the payment of many thousands of dollars in wages, the employment of thousands of men, the annual increase of the export business of the United States, the great financial and economic value to the country of the production of cotton oil, thus giving to the consumer a sweet and wholesome product, and supplying a deficiency in the world's shortage of olive oil and butter, the enrichment of the soil by the use of Cottonseed Meal, a by-product

of the seed, the greatly increased development of the dairy and live-stock interests of the South by the use of the meal and hulls, the establishment of mattress factories by the use of the linters, and the erection of plants for the manufacture of machinery used in operating cotton oil mills. While all of this domestic development has been in progress, cottonseed products have invaded the great olive groves of Europe and Asia, competing on equal terms with the products of the ancient olive, while the chief by-product, Cottonseed Meal, has been feeding the immense herds of cattle in Denmark and the dairy herds of England and Holland. When all of this has been considered the benefits of this wonderful industry command the attention of the students of industrial conditions in all countries.

In accomplishing these magnificent results the industry has been of almost incalculable value to the immediate section where it has been established. It adds annually directly to the value of the cotton crop about one hundred million dollars, with all the incidental advantages that this direct increase brings with it. It is building packing-houses and, in time, will make the South the great cattle-raising section of the Union. The ramifications of this industry are so varied that they penetrate the fields, the factories and the homes of the people. Although its chief product—oil—has been listed and traded in on the New York Produce Exchange for a comparatively short time, the transactions in it now exceed those in lard, which has held a high place for many years.

Among other industries, therefore, the cotton oil industry is a strong, lusty and vigorous young giant. Believing that

such an industry must be of great interest to the thousands who have their money invested in it, many of whom know little of its real importance and progress, as well as to those other thousands who produce and handle its products, and to the consumers of these products, I have brought together in these pages a number of historical and industrial articles treating on this subject, which were prepared by me during the last five or six years, together with other information that has not heretofore been published, and this is submitted with the hope that it will still further promote the interests of an industry that is still growing, and upon whose success depends largely the financial and physical well being of many thousands of the people of the United States.

CHAPTER I.

THE GREAT COTTONSEED INDUSTRY OF THE SOUTH.

ITS SMALL BEGINNINGS—ITS RECENT RAPID DEVELOPMENT—THE SALES OF COTTONSEED OIL IN ALL THE MARKETS OF THE WORLD—THE PIONEERS IN THE BUSINESS—THE SENSATIONAL INCREASE IN TRADING IN COTTON OIL ON THE NEW YORK PRODUCE EXCHANGE—THE PRODUCTS OF THE CRUDE COTTONSEED OIL MILLS—THE FOREIGN TARIFFS ON COTTON OIL AND THEIR EFFECT ON THE INDUSTRY—THE REFINED PRODUCTS—THE IMPROVEMENT IN REFINING COTTON OIL AND THE RESULTS—EXPORTS—THE INTERSTATE COTTONSEED CRUSHERS' ASSOCIATION AND ITS POWER IN PROMOTING THE INTERESTS OF THE INDUSTRY—A GLANCE AT THE FUTURE.

Travelers on the Mediterranean Sea, looking across to the limestone cliffs and hills of Southern Europe and Northern Africa, are charmed by the white blooms and grayish green foliage of the olive groves. The olive is supposed to have originated in Syria, the home of the date, the fig and pomegranate, and gradually extended through Spain, Italy, France and along the entire Mediterranean coast. The waters of the Mediterranean, being warmer in winter and cooler in summer than the air, maintain a uniformity of temperature favorable to the complete development of the olive. The tree is partial to sea breezes, and this, with the limestone soils, is necessary for the perfection of the fruit. Its production must, therefore, be confined

largely to sections where such conditions of soil and climate prevail.

While the olive has been grown to some extent in California, Mississippi and Georgia, its fullest development in the United States has been on the California coast, and even there the output is comparatively small.

As the demand for olive oil and other edible oils in Europe exceeded the production, it became necessary for consumers to look elsewhere for an oil equally as good to supply the shortage. Nature, which never permits a vacuum in her beneficial scheme of production, has selected the garden land of America to fill this requirement.

On the eastern slopes of the Allegheny range and in the southern valley of the Mississippi River, with two mighty ranges of mountains to guard it, and more than three rivers to water its fields, its temperature equalized by the waters of the Gulf of Mexico at its feet and the waves of the Atlantic on the east, the Eden of America, whose flaming swords have all been turned into ploughshares, lies basking in the brightest sunshine that ever smiled upon this earth.

The delightful climate of the cotton belt of the South rivals that of Italy, the scenery of the country is as charming and the cotton plant, with its cream and crimson colored blooms, its pure white fruit and dark green foliage, yields nothing in point of beauty by comparison with the olive.

Taken altogether, therefore, it was natural that the Southern States of the Union should be expected to supply any deficiencies in the products of other countries so closely resembling it in natural conditions, and the South is meet-

ing fully this expectation by the manufacture of its cotton oil, not only supplying Europe, but the rapidly increasing domestic demand.

"Dr. Benjamin Waring established the first paper, oil and grist mills at Columbia, S. C., and expressed from cottonseed a very good oil."

This is the brief announcement in Mills' "Statistics of South Carolina," published in 1826, of the birth of a great industry in the South. Nothing more is recorded except that Dr. Waring was "a great encourager of useful arts" and was State Treasurer. We are, therefore, left to conjecture as to other conditions existing at that time or how much this mill contributed to the future development of the industry, but we can imagine what might have caused Dr. Waring to make "a very good oil" from cottonseed and how he came to do it.

Being a professional man and a scholar he was somewhat of a dreamer and, of course, a student. He operated a grist mill located on the Congaree River, on the banks of the canal that furnished the power to run the mill. He doubtless also ran a small cotton gin and in order to get rid of the seed they were thrown into the canal to be carried off later by the rise of the river, as they were then without value, except such as were needed for replanting.

Nearly all great discoveries are made by accident. Dr. Waring, in an absent-minded way, probably picked up a few seed and thoughtlessly placed them in his mouth. They had a rich, nutty flavor and tasted good. This increased his interest, and he further noted that where the seed had been trampled on they gave off a rich, golden-yellow oil.

He concluded that if the flavor of the seed was good the oil, if properly handled, was valuable. He probably fitted up a crude hand press, as the Chinese had done two thousand years before him, and expressed the oil. He was further convinced of its value, and, in the satisfaction over his discovery, discussed it with his friends, and Mills recorded the discovery. Or it is possible that he may have traveled in England and heard of, or visited, the cotton oil mill of Foster Brothers at Gloucester that had been there in active operation for one hundred years before Dr. Waring made his investigations. But, whatever was the cause of this early attempt toward the manufacture of cotton oil, it has been followed by one of the South's most interesting and most important developments.

Georgia had an oil mill in 1832, but its history is recorded in about as few words as that of the South Carolina plant.

The commercial importance of the industry had its beginning from 1850 to 1855. It had just begun to attract attention when its further development was arrested by the Civil War between the North and South. The pioneers of the fifties were Pierre Paul Martin, Paul Aldige and Ambrose A. McGinnis, all of New Orleans, La. Immediately after the war attention was again directed to the business, and General E. P. Alexander, formerly of Savannah, Ga., established a mill at Columbia, S. C., in 1866. Mr. C. E. Girardey followed with another mill at New Orleans, La., in 1868. It was, however, not until about 1880 that the industry actively attained commercial importance in the South. It met with one reverse after another until a great

majority of the mills were brought under the ownership of one large company, which, for several years, practically controlled the output of all of the mills.

Among the leading men of that period were Mr. J. J.



Georgia Cotton Field, Yielding Over One Bale to the Acre.

McCann, of Tennessee; J. F. and M. J. O'Shaughnessy, of Tennessee; Robert Gibson, of Texas; George A. Morrison and R. F. Munro, of New York; Moses Frank, of Georgia; Jo W. Allison, of Texas; E. M. Durham, of Mississippi; A. D. Allen, of Arkansas; T. R. Chaney, of Connecticut; J. O.

Carpenter, of Mississippi; A. E. Thornton, of Georgia, and George O. Baker, of Alabama.

These men builded well, even better than they knew, and laid firmly the foundation of the present magnificent edifice.

In 1887 the Southern Cotton Oil Company entered the field with mills located in South Carolina, Georgia, Alabama, Arkansas, Texas, Louisiana and Tennessee. The establishment of these mills by a company with ample capital gave new life to the industry. The officers were Henry C. Butcher, of Philadelphia, president; John Oliver, of New York, treasurer; Fred Oliver, of Charlotte, general manager, and D. A. Tompkins, of Charlotte, chief engineer. They had associated with them in the South L. W. Haskell, at Savannah; C. FitzSimons and J. S. Price, at Columbia; Henry Oliver, at Atlanta; A. C. Landry, at New Orleans; Alston Boyd, at Memphis; J. J. Culbertson, at Little Rock; E. W. Thompson and J. W. Black, at Montgomery, and W. G. Kay, at Houston. Many of these men are actively engaged in the business at this time.

The industry continued to grow by the establishment of many smaller mills and at present the number in the United States exceeds eight hundred, with a capital of over one hundred million dollars.

There are one hundred and forty-five crude oil mills in the State of Georgia. Of these, one hundred and seven are owned by local interests, farmers, bankers and merchants. The other thirty-eight are controlled by outside capital. There is, therefore, no monopoly in the business in Georgia, nor anywhere else in the South. These mills in Georgia

crush about 450,000 to 500,000 tons of seed annually and produce about 350,000 to 400,000 barrels of crude oil, from 200,000 to 225,000 tons of meal, 125,000 to 150,000 tons of hulls and 35,000 to 40,000 bales of linters. There are four refineries in Georgia, two operated by the larger companies and two by the local mills. There are two hogless lard plants in the State.

Competition between all of these interests comes in the purchase of seed and the sale of the by-products—meal, hulls and linters. Georgia refiners must, of course, compete with each other for the crude oil, and with the refineries operated in other parts of the United States, the packers of the West and European buyers.

Some of the larger companies have established mills for crushing seed as well as refining the oil, and have thus become competitors for the raw material, but notwithstanding this competition the small mills, by reason of their nearness to the cotton fields, are able not only to market their seed without freights, but can dispose of their by-products at home, where they are needed by the farmers, stock-raisers and dairymen, at less expense than their larger competitors. These advantages will probably be sufficient to sustain these small mills in any competition coming from the larger interests, although, on account of this, the profit of the home mill will be decreased.

Nothing shows more clearly the development of the business than the contrast between Dr. Waring's little enterprise on the banks of the Congaree River in 1826 and the following article from the New York *Herald* of November 12, 1909:

"Although for many years business on the New York Produce Exchange has gradually been growing smaller, there is one department that is growing at a remarkable rate. That is the cottonseed oil department. The growth in trading in this commodity has been so great that the quarters for the traders who specialize in that line are to be enlarged.

"Cotton oil traders are to have a pit in the center of the big exchange floor. At present the cotton oil crowd has a little circle off at one corner of the room, and about a dozen brokers crowd the limited space. A pit similar to the pit on the cotton exchange, and as large, is to be provided for the traders.

"Only a few years ago if two thousand barrels of oil were traded in it was counted an active day's market. Now they count it an active market when the sales aggregate 40,000 barrels in a day.

"So important has become the New York cottonseed oil market that its quotations are accepted all over the world as a basis for official quotations, and the figures are cabled to all parts of the world at the close of trading. The telegraph companies have established on the Produce Exchange permanent offices for the exclusive dissemination of cottonseed oil news.

" 'There is more than \$100,000,000 invested in the cottonseed oil industry in this country,' said a leading specialist yesterday, 'and the commodity is becoming more and more a vehicle for speculation. I remember when total sales in the market would not average more than 2,000 barrels a

day. Yesterday I sold 10,000 barrels myself and have sold as high as 20,000 barrels in a day.'

"At present the market is not only very active, but prices are very high. This is naturally due to the fears of a short cotton crop as regards new oil, which will actually appear next month. As for the old crop, it is high because of the exceptionally fine quality of the oil, the product last year having been the best in recent years."

What is known as a crude oil mill in America produces



A Modern Cotton Ginnery at Cartersville, Ga. Capacity 100 to 125 Bales Daily.

crude cottonseed oil, cottonseed meal, hulls and linters. In the United States the oil is the most valuable product, and this commodity gives the mill its name. In England they are called cake mills, because the cake is more valuable than the oil, which is inferior to the American oil. The English mills make the same products, except hulls. In England the hulls are all ground into the meal, while in this country they are separated.

The crude oil is sold to the refiners, who convert it into refined oil. In the process of refining the crude oil the residue is called "soap stock" and is utilized by the soap manufacturers throughout the country.

The refined oil enters into the manufacture of such commercial products as salad and cooking oils, hogless lard and oleomargarine, and is not only used in this country, but enters into competition throughout the world with olive oil, butter, lard and similar edible greases.

The cottonseed meal is the ground cake and is used for stock feeding, both in this country and abroad and in the Southern States enters largely into the manufacture of commercial fertilizers.

The lint, which is the short cotton cut from the seed is used chiefly in the manufacture of mattresses, pillows, comforts, quilts and similar articles, and in foreign countries is converted into gun cotton, known as the highest of explosives.

The hulls are used only in the South for stock-feeding, taking the place of hay, corn, fodder, corn shucks and similar products. Experiments already made indicate that this product will possibly be converted into paper stock, which will give it a higher value than as a feed stuff.

There is not an article produced by the oil mills that cannot be used in some form by the grower of the seed, and just as the values increase so will the value of seed for milling purposes be enhanced. It is not difficult, therefore, to point out the close relation existing between the cotton farmer and the cotton oil mills. Their interests are mutual and, therefore, the more of these products the farmers

consume the better prices they will realize for their surplus seed—that is, the seed not used for planting, and on the present value of cottonseed products no seed should be used for any other purpose than for planting or milling. There is no outlet for seed that gives them such value as the oil mills.

Practically all of the profit earned by the cotton oil mills is disbursed in the locality where it is made. If there was nothing else to make the industry popular, this fact alone should give it a place in the South above all other manufacturing establishments. It is nearer to the farmer than all other factories. It is now operated almost on the basis of the local grist mill; it works on toll, returning to the farmer the products of his seed, after deducting an amount sufficient to cover the cost of production and a reasonable profit—sometimes no profit at all.

Cottonseed oil has become a staple product in European as well as in American markets—in fact, it largely regulates all of the markets of the world in competition with similar products. In all countries its high qualities are recognized, and in no country is it regarded as having any rival of equal value, with the possible exception of olive oil. In comparison with all edible oils it stands at the head.

It has spread over Europe, including every olive country in the Mediterranean basin. It has been the subject of tariff laws in all of these countries. It has engaged the attention of the cabinets and governments of France, Austria, Spain, Italy and Turkey. Recently it was one of the articles that threatened to disturb tariff relations between the United States and Germany and France. When the

last tariff bill was passed by the United States the Italian Ambassador was censured by his countrymen for failing to protect their interests in this bill by bringing about such reciprocity as would give the Italian olive growers the favorable terms which they thought should have been obtained. In Turkey the olive growers threatened some years ago that if cotton oil was admitted to that country they would destroy their groves in retaliation for such action by their government. This was finally adjusted, and cotton oil is now admitted to the Ottoman empire free of all duties. Spain excluded it entirely for the protection of their olive growers and Austria followed. Germany, France and Italy levied heavy taxes, and even little Servia imposes a tax of four cents per pound on it, but in spite of all of these artificial barriers to the sale of cottonseed oil it has moved steadily forward and captured the world's markets.

The highest and best use of the oil is as an edible product. When used for cooking it is the best and most economical of all commodities now used for that purpose, not only because its market value is less than butter and lard, but because it will go one-third further than lard and equally as far as butter.

As late as 1879 the Encyclopedia Britannica did not list cotton oil as an edible product. Later even than this, a Western lard manufacturer thought of compounding it with hogs' lard and was warned that it was unwholesome, just as some few experts had warned the people regarding the "love apple," which came afterward to be known as the luscious and appetizing tomato, and just as some United States Government experts have warned stock-feeders

against the use of cottonseed meal on account of the "toxic" qualities contained therein, although these same feeders throughout Europe and America were then fattening whole herds of cattle on cottonseed meal in England, Holland, Denmark and on the plains of Texas. The lard manufacturer referred to submitted samples of cottonseed oil to the



Cotton Ginnery During the Busy Season.

leading chemists of Europe and America, who pronounced it not only pure and absolutely free from objectionable matter, but one of the best of all vegetable oils, and he proceeded to use the results of his investigations in the manufacture of his "pure leaf lard," which product became one of the most popular commodities of its kind under this brand, and has continued to command satisfactory prices on the

market advertised under its own brand as a cottonseed oil product.

For many years the refiners were content to use ordinary methods of refining, which produced an oil which had left in it an acrid flavor with some other objectionable features which prevented a general introduction and use of the oil for edible purposes. Efforts were made to get it into general consumption, but after the expenditure of large sums for advertising, and without materially increasing the demand, the manufacturers found it more profitable to export the oil to foreign countries, where it was used in blending with olive oil and in the manufacture of butter, and in large quantities returned to America under other names, greatly enhanced in value. At that time about two-thirds of the oil was exported. At present only about one-third of the oil is sent to foreign countries.

The discovery of the Wesson process of refining cotton oil, by which the product was put on the market in a condition of absolute purity and flavor, gave a tremendous impetus to the use of the oil in America, as it not only proved a thoroughly wholesome product, but stimulated the other manufacturers generally to the production of better oils than they had previously produced. The bakers were, perhaps, the first to acknowledge its value from an economical standpoint. They were followed, naturally, by the housekeepers and hotels of the country, and at present the Wesson brand is the standard of excellence for all cotton oil, and is almost as well known to the hotels, bakers and households as flour, lard and butter.

Some people still buy "pure olive oil" for salad purposes and honestly believe that it is superior to cotton oil.

"Pure olive oil" is not much more than a catch word, although, of course, the article may be entirely olive oil. Much of the olive oil used locally in those countries where it is produced for cooking purposes is so rank in flavor that an American consumer would not touch it, nor an American stomach stand it. In many of those countries the farmers carry the olives to the mills, simply have the oil expressed and then put up in bladders. This is one kind of "pure olive oil."

Why should any cotton grower use olive oil either for salad or cooking purposes when he can get cotton oil made from his own seed that is just as pure, just as palatable and in many cases more digestible than olive oil? Why should any cotton farmer buy Western lard instead of hogless lard or cotton oil and pay just as much for it per pound as he pays for the Southern products which are just as much his own products as the meal ground at the grist mills from his own corn?

In European countries the best grade of cotton oil is used for salad and cooking, also in the manufacture of various kinds of butter compounds, called oleomargarine, etc. In those countries the use of cotton oil in this way is encouraged by the governments because butter has become so scarce that people of ordinary means are unable to use it and desire something at lower prices of as good quality as butter, and oleomargarine answers every purpose for which butter is used.

The composition of this product is about sixty per cent.

of fresh, sweet milk, about twenty-five per cent. of high-grade cotton oil and fifteen per cent. of oleo stearine. The formulas and percentages of each ingredient vary in different sections, but these proportions represent the average. Oleo stearine is manufactured from the choicest of beef fats, thoroughly inspected by the government before it is used in the manufacture of oleomargarine. It is used only to give the mixture the consistency of butter. While other governments, just as careful about the health of their people as our own government, encourage the manufacture of this product, our government levies a tax on oleomargarine of two cents per pound if uncolored and ten cents per pound if colored.

Butter manufacturers use a harmless coloring matter, and oleomargarine manufacturers would do so if permitted, simply to improve the appearance of the product and cater to the prejudice of consumers, who prefer the golden-yellow color, both in oleomargarine and in butter, to the white product.

In Denmark the people last year used over 60,000,000 pounds of oleomargarine. The population of that country is only 2,000,000, so that the consumption really meant over thirty pounds per capita. On the same basis the American people would consume 3,000,000,000 pounds per annum, and the oil needed for this production would amount to over 2,300,000 barrels, possibly two-thirds of the production of cotton oil in this country.

In 1880 about 130,000 barrels of oil were exported to European countries and only about 20,000 barrels used in the United States. The oil is now exported to almost every

civilized country. The last Treasury statistics report, ending February 23, shows shipments of from three barrels to Port Maria, Jamaica, to 51,137 barrels to Rotterdam, Holland. The average annual exports is about 1,000,000 barrels, with an average value of about \$16,000,000. The oil is in general use throughout the entire Mediterranean



Type of Modern Crude Oil Mill. The Products Are Crude Cottonseed Oil, Meal, Hulls and Linters.

basin—the home of the olive oil. The bulk of the shipments go to England, Holland, Germany, France and Italy. The value of the exports from September 1 to February 24 amounted to about \$6,000,000. Heavy tariffs levied by the governments of Germany, Italy, France and Austria, together with the substitution of other vegetable oils for cotton oil, have considerably reduced exports from this country, but the decrease of the use of the oil in other

countries has been made up by its domestic use. The total production for the year 1909-1910 is estimated at around 3,000,000 barrels, of which fully 2,000,000 barrels will be used at home. This remarkable increase, both in the production and consumption, has been due to the recognition of the high value of the product both in this country and Europe.

Next to oil, cottonseed meal is the most important article of the mills. Its best use is in feeding horses, cattle, sheep and hogs, but considerable quantities of it are still used as an ammoniate in commercial fertilizers. In addition to the amount consumed at home the exports of cottonseed meal for the year ending June 30, 1909, was over 600,000 tons, valued at about \$16,000,000. The bulk of these shipments have gone to Denmark, Germany, Holland, Norway, England, Scotland and France. Denmark alone took over 200,000 tons and Germany nearly as much. All of the meal shipped to these foreign countries is used for stock feeding. Danish bacon is famous all over Europe, and it is said that the hogs from which this bacon is raised are fattened on cottonseed meal.

Linters are not classified in the Treasury Department statistics and, consequently, no estimate of the value of this product can be made.

The total annual value of the exports of all cottonseed products averages about \$30,000,000.

The late Colonel George W. Scott, of Decatur, Ga., was the pioneer in the use of cottonseed meal as an ammoniate for commercial fertilizers. His great success in its use was quickly adopted by other manufacturers, and at the

present time this product is used extensively for this purpose. A large number of mills have fertilizer factories in connection with their oil mills. On account of their location the local mills are able to deliver to the farmers promptly the fertilizers as needed, and, having the meal as one of their raw materials on hand, they are able to manufacture at a very reasonable cost. Popularity and value of meal goods is now well known to all of the cotton farmers. They are directly interested in its use because it gives a greater value to the seed.

The history of the apothecosis of the cotton oil industry is the history of the Interstate Cottonseed Crushers' Association, which was organized in Nashville, Tenn., in July, 1897. The officers and members of this association are engaged in the manufacture of cottonseed products and personally interested in the success of the business. They loyally, diligently and successfully devoted their time, their intelligence and their energy to the promotion of the industry, in which not only they were personally interested, but the interests of the farmers of the South were involved. Membership in this association is the standard by which men engaged in the industry are measured. Recognizing that publicity is the best method for promoting the success of any product worthy of recognition the association created a bureau for the purpose of showing the "Man from Missouri," as well as the man from everywhere, the value of cottonseed products. In addition to informing our own people on this subject the Bureau of Publicity desired to reach the world at large. With the active assistance and encouragement of similar State organizations and of the

State Department at Washington and the Department of Commerce and Labor, under the immediate supervision of Hon. John M. Carson, chief of the Bureau of Manufactures, a special agent, representing cottonseed products, was sent to all parts of Europe to study the conditions affecting these products. The United States consuls in all parts of the world were instructed to make similar investigations and report fully. This has been done for about three years, and the results have been eminently successful and satisfactory.

The publication of the reports from the special agents and consular officers in American newspapers, trade journals and periodicals has intensified the interest in the American product and it has been followed by a greatly increased demand for it in America. So greatly has the domestic demand increased that the European dealers, finding the price so high in America as to make its use almost prohibitive to them, have been scouring Europe to find some substitute for it. The reports of trade journals and consular reports clearly show that these substitutes are compared with cotton oil as the standard before being accepted. The exports this year hardly exceed one-third of last year at the same time, but the increased demand for the oil in the United States has taken all the surplus heretofore exported.

Favorable responses to the publicity work of the association came much more quickly from the foreigners than from our own people, especially our farmers, who are more vitally interested than the people of any other country, and while the farmers are showing much more interest than

formerly, many of them still do not fully recognize the superiority of cottonseed products over all competing commodities. Some of them still believe that olive oil is better for salads and cooking, because they have believed it all of their lives, and some of them seem to think that hogs' lard is as good as hogless lard. Time, however, will correct all of this at home. The recognition of the full value of cotton oil and its products is fast coming, if it has not already arrived. There is, however, a more serious condition re-



*Herd of Thirty Jersey Cows Fed on Cottonseed Meal. They
Furnish \$100 of Cream Per Week.*

garding the by-products—cottonseed meal and hulls. While these products are very generally used by our dairy-men and stockmen, some of them continue to use corn and oats and mixed Western feeds for stock feed, allowing New England and Europe to haul away the meal and hulls from their very doors. Some farmers continue to use blood and other animal ammoniates in their fertilizers, ordered from Western slaughter-houses, instead of using cottonseed meal—the best ammoniate in the world. They do not seem to realize that this is a most wasteful method. Those farmers who do this are acting contrary to their own inter-

ests, directly and indirectly. By their failure to co-operate with the oil mills they are depreciating the value of their cottonseed. Such a policy is unwise and wasteful. The mills can stand it better than the farmers, because the people of every other country need and take the meal. Our farmers possibly do not understand that there is not a farm of seventy-five acres in Georgia that cannot raise some beef cattle, practically without cost, as the droppings from cattle fed on cottonseed meal and hulls, properly cared for, is worth as much as the meal and hulls are as a fertilizer before being fed. If a general policy of feeding some cattle on every farm was adopted by our farmers it would lead to the establishment of packing-houses, and this would make the South the great live stock section of America. Instead of bringing into Georgia about \$750,000 worth of beef every week, and sending that much money out of Georgia, as one packer has recently stated; Georgia would be shipping beef to other States and bringing into the State an equal amount or more money than they are now sending away. The benefit of the change is easily understood.

Dr. A. M. Soule, president of the Georgia College of Agriculture, in an address recently delivered at Macon, shows that by the use of cottonseed meal as a feed for mules the farmers of Georgia can raise as fine mules as the West at a cost of about \$60, instead of \$160, average cost per head of Western stock. Judge Henry C. Hammond, of Augusta, has shown by his own personal experience of years that horses as work stock can be economically and successfully raised and worked on cottonseed meal feed.

Opportunities on these lines are almost limitless and in

time will be fully utilized, but every day that this is postponed is deferring the further and greater and general prosperity of this section.

At the annual meeting of the Interstate Cottonseed Crushers' Association in Louisville, Ky., in May, 1908, the president of the association cited the reports of consular officers and special agents showing the great interest in cotton oil in foreign countries and America and, based on these reports, predicted a shortage in vegetable oils, and consequently the high prices that would follow. The cotton oil interests of the South realized this year the soundness of the prediction: the shortage developed and the high prices followed—the highest for cotton oil ever known. It is safe to say that nothing less than a financial panic can bring about much lower prices in years to come. The population of the world is increasing, while the production of vegetable oils shows no appreciable increase, and new uses are being found for all of these oils. A butter shortage, almost a famine, already exists, and it is said that in some parts of Europe the people have not seen real butter in twenty years. Oleomargarine, composed largely of cotton oil, has satisfactorily supplanted it. The demand for this commodity is constantly increasing, necessitating a greater consumption of cotton oil. Hogless lard compounds are more generally used every year and cotton oil is the largest factor in the manufacture of this product, while the demand for the oil itself is constantly increasing. There is nothing in present conditions to indicate that cotton oil will ever reach the former low levels of prices.

In answer to questions from an old Confederate veteran

at Mount Airy, Ga., I told him how we now made cotton oil that fed the people in place of butter and lard; cottonseed meal that was now used in making bread, taking the place of wheat and corn bread, and how this commodity further supported and fattened horses, mules, cattle and hogs, fertilized the land and made big crops of all kinds; linters that were used in the manufacture of quilts, mattresses, pillows and paper, as well as gun cotton, and hulls that took the place in feeding cattle of timothy hay, corn fodder, shucks and all other roughage. As I continued to enumerate these products and their use, the old soldier jumped to his feet and said: "If we had had oil mills during the war the Yankees could never have whipped us." After cooling down a little he added: "You know the Yanks never did *whip* us, they just starved us out, and they could never have done this if we had had oil mills," and the old hero almost wept over the neglected opportunities.

It is not at all likely that the question of "whipping the Yanks" will ever come up for consideration again, but the veteran's view of the possibilities of cottonseed products was not overrated.

The farmer in selling his seed, the mills in crushing them, the refiners in putting the oil in marketable condition, the brokers who have handled the product and the trade journals which have advertised them have all done their part in the development of this great industry. If they would all pull together, the farmer using the mills' products more extensively, the crude mill recognizing its dependence upon the farmer for its seed, the refiner dealing liberally with the crude mill for his oil, the brokers increasing, so far as

possible, the value of the products and the trade journals continuing to do their splendid part in the work, the money value of the product of this industry would be greatly



Champion Cow of Georgia. Gives Annually, Butter 544.3, Milk 9,252. "Pearl," the Best Cow in the Best Herd, Under Daily Observation, is fed on Cottonseed Meal to Increase Her Wonderful Production.

enhanced, and it is not impossible, if this is done, that we may soon be able to report, as an accomplished fact, that the value of the seed is equal to the value of the cotton itself.

CHAPTER II.

COTTONSEED AND COTTONSEED PRODUCTS.

(Address before the Cotton School of the University of Georgia, Athens, Ga., January, 1908.)

THE RELATIONS BETWEEN THE FARMER AND THE OIL MILLS—
HOW EACH IS BENEFITTED BY AND DEPENDENT UPON THE
OTHER—THE PRODUCTS MADE FROM COTTONSEED AND
HOW, BY THE MANUFACTURE OF THESE PRODUCTS, THE
MILLS HAVE GREATLY INCREASED THE VALUE OF THE
COTTON CROP.

I read a story some time since about a man who said he was going out to give his friends some good advice about their business. He returned very shortly and, on being asked whether or not he had carried out his intentions, he said he had not, because as soon as he undertook to tell his friends something about their business they tried to advise him about his business, and that was one thing he would not allow anybody to do. I don't want you to think I am advising you entirely about your business, because in the proposition I am expected to discuss I am almost as much interested as you are.

You have been told, and will be told by others, all about the selection of seed for planting and the advantages to you in doing this from an increased yield of the fibre. My part of the program in this respect is to tell you how you

may benefit by a better selection and handling of the seed by increasing the value of the seed itself and to explain to you how the oil mills will be benefitted by such action on your part.

If I was asked broadly to state how this result may be accomplished quickest I would answer: First, plant better seed and take better care of them, and, second, buy more of the products of the oil mills.

If you want to get more money for your seed you must furnish the mills better seed and you must consume as much of their product as possible, which will increase the value of the products and, necessarily, enhance the value of the seed.

When George Francis Train was asked how Kansas City could become as large a pork-packing center as Chicago, he answered, "Kill more pigs." On the same line, to get better prices you must furnish better seed and you must buy more of the products of the seed.

In a report of the Department of Commerce and Labor, 1906, published under the direction of the Director of the Census, it is stated:

"Possibly the most difficult problem in connection with the cottonseed products industry is the proper storing and preservation of these seed. The lint is almost waterproof and is but little injured in passing from the field to the factory, but not so with the seed, which is very easily injured and reaches the mill in much worse condition relatively than the lint. In wet seasons this depreciation amounts to a large percentage of the value of the seed, and the products from such damaged seed must be sold for very

inferior uses. The value of the oil shipped depends upon the condition of the seed when it reaches the mill. Evidently the products manufactured from cottonseed would be more useful and valuable if they were carefully handled and the good and bad seed kept separate. To accomplish this the co-operation of the grower, ginner and miller is required."

A seed crop worth one hundred million dollars to the South, and which if it were all converted into cottonseed products would add more than another hundred million dollars to the value of the manufactured products of the South, is worth saving and is worth your most serious consideration.

The establishment of oil mills in Georgia has made the value of your seed crop this year equal to the cost of all the commercial fertilizers used by you under all of the crops planted in Georgia of every kind and character, while the excess over the cost of fertilizers will pay the cost of ginning and packing the cotton crop; or the value of the seed crop will pay all the cost of picking your cotton and ginning it, including the cost of the bagging; or it will pay the cost of the fertilizer and the ginning and packing of the cotton crop of the State. The mills further add to this magnificent sum by converting the seed into edible oil rivaling the famous olive oil of Europe; and by transforming this oil into products as useful and more wholesome than any animal fat, and still further increase these values by manufacturing from the seed a stock food exceeding in feeding value all other known feeding materials.

They also encourage the dairy interests of the South and

will eventually create a great cattle industry, followed by the establishment of packing-houses.

Does not this increase in value of Georgia productions and the uses to which these products are put convince you of the great waste of wealth when any of the seed not needed for planting are used for any other purpose than milling? And does it not further convince you that you should co-operate with the mills in improving the quality of the seed by better care and handling and by using extensively the products from the seed?

When you are tempted to use cottonseed for feeding stock or for fertilizing the land you should remember that in every bushel of seed used you are absolutely throwing away about two-thirds of a gallon of the best oil known to the world. When you feed seed to cattle, even the finest Jersey ever bred, it is like "casting pearls before swine." Fertilizing the land with it no crop ever grown—not even our "King Cotton," or his royal brother, held sacred and worshipped by the Hindus—would countenance, because of the wanton waste of such splendid material.

Mr. Edward Lehman Johnson, of Memphis, Tenn., who has had many years of experience in operating oil mills and who is a well known writer on this subject, estimates that the damage to the cottonseed crop of the South annually is about ten million dollars, due almost entirely, except in very bad seasons, to the careless and negligent methods of handling these seeds at the ginneries and on the farms.

If the mills should use some of the seed shipped them in making oil this oil would have no better flavor or taste

than the olive oil made from fruit that matures early and drops from the trees, and which a writer describes as "detestable."

The average seed received from the mills is of almost every known variety and contains a certain amount of immature bolls, trash and other foreign matter. Our Athens manager once sent me several rifle cartridges taken from the seed by the cleaning machinery. Improved cleaning machinery extracts from the seed a large amount of similar substances, including nails, bolts, screws, keys and rocks. All this adds to the weight of the seed and costs the mill as much money as the seed itself, but does not yield oil or meal and, consequently, is valueless to the mills.

Hundreds of tons of seed are lost every year by the loose way in which seed are scattered around the ginneries and seed houses. Claims for shortage in weights are often made on the mills by shippers who waste the seed in this manner. Sometimes the farmers who haul the seed to the mill and the shippers mix the good seed with the bad; the mills, of course, grade all such seed as bad, as the products from such seed can only be used for such purposes as inferior seed will produce. A small amount of such off-quality seed depreciates the entire shipment.

At a meeting of the Interstate Cottonseed Crushers' Association, held in Atlanta about two years ago, Mr. E. Van Winkle, of Atlanta, a well-known manufacturer of oil mill machinery, suggested to the convention that a standard for seed should be established and all shipments graded on the same plan as wheat, corn, oats and other grains then designated and that all shipments should be graded up or down

from this standard. Certainly, such a plan would be fair and just to all parties. But nothing was done at that time, as it was thought best to interest the farmers themselves in this matter. If you farmers will consider and discuss it in your various organizations you will bring about an improvement much quicker than it is possible for the mills to accomplish.

The invisible loss in milling cottonseed varies from five to ten per cent., due very largely to the quality of the seed and the foreign substances mixed with it. Even when all the seed are sound some are not fully matured and also contain a large percentage of notes, bolls, trash, etc., which have to be separated from the seed before the seed are crushed, and is a total loss to the mills. This waste costs the mills as much money as the perfect seed.

So far as I know, there has never been any investigation to determine the effect of soil, climate, fertilization or cultivation on the value of cottonseed for milling purposes. Doubtless this will come with the progress of the cotton oil industry. In the meantime, the mills have been governed in their estimate of the value of the seed by the different varieties grown and by the results of chemical analyses of such varieties and the actual yield of products obtained in milling. In referring to analyses you must bear in mind that the chemist uses only one hundred seed in making each test, and that there is over six million in a ton, consequently, analyses are only approximately correct and answer only for comparisons.

These analytical and practical tests of seed have shown that the black varieties, practically free from fiber, give

the highest yield of oil and meal. This larger percentage of oil is due to some extent to the fact that the seed do not contain any lint and are almost entirely free from any foreign matter.

The green seed show by analyses and tests as second in value to the black seed for milling purposes, and the white varieties give the lowest results in yields of products.

The quantity of oil available by the best milling processes is only about eighty per cent. of the quantity shown by analyses to be in the seed, while ordinary milling processes produced even smaller yield. This must be considered in connection with the analyses.

This is a sample of Sea Island seed, used in Georgia by the coast mills in the section where this variety is grown. These seed contain by analysis about twenty-two and one-half per cent. oil, about thirty per cent. of protein, or about 6 per cent. ammonia.

This is a sample of what is known as the Peterkin, a hybrid black variety, almost entirely free from fiber. These seed are now grown in all parts of the State and almost every shipment contains some of them. In some sections of the State a very large percentage of the total receipts at the mills are of this variety. Analyses show that they contain about twenty-two and one-half per cent. of oil and about twenty-one per cent. of protein, or four per cent. ammonia.

This is a typical sample of green seed and contains about twenty-two and one-half per cent. of oil and about eighteen per cent. of protein or eight and one-half per cent. of ammonia.

This sample represents the best type of the white variety, planted most extensively in Georgia. It contains only about eighteen and three-quarters per cent. of oil and seventeen and one-half per cent. of protein, or three and one-quarter per cent. ammonia.

None of the varieties, except Sea Island come to the mills free from trash.

This type represents an average sample as the seed are received at the mills. They are mixed with all varieties, consequently sometimes show a larger amount of oil than white seed because of the large percentage of black and green varieties mixed with them. Average seed like these will show about twenty-one per cent. of oil, eighteen per cent. protein, or three and one-half per cent. ammonia after being cleaned of trash and foreign substances.

Some recent examinations of seed representing samples from all parts of the State show about thirteen per cent. black, about sixty-nine per cent. white and eighteen per cent. green.

These comments on the different varieties are based on good, sound, dry seed. Slightly damaged seed sometimes contain as large a percentage of the motes and kernels as sound seed, but if badly damaged the kernels will weigh only a small proportion of the amount of the kernels in sound seed; but in both cases the oil is unfit for use except in the soap kettle, and the meal is fit only for fertilizer purposes.

This is a sample of trash, etc., separated from the seed before milling.

I show you here a sample of sound and damaged seed

and of prime oil and meal made from the good seed and similar samples of oil and meal made from damaged seed. You can readily see the difference.

The refining loss on oil made from good, sweet seed is usually between five and six per cent. On oil made from damaged seed this loss will run from ten to thirty per cent., or even higher, showing the annual loss to the mills from seed not carefully handled. The oil made from sweet seed is a perfectly edible product; when made from damaged seed its color and flavor are depreciated and it is used only for inferior purposes.

The damage to seed results from excessive moisture and from exposure to the weather of the seed cotton or the seed, and from germination when stored in houses where the heat from large piles of seed produces germination. Sometimes in parts of the State cotton is picked and piled in the fields and then left for days and even weeks during the rainy weather. Consequently, the mills in that section rarely ever make prime oil. Of course, the seed heat and are often badly damaged before the cotton is ginned. In a recent investigation I found that in one section of the State, where the conditions mentioned prevail, over thirty per cent. of the seed were badly damaged and all of them more or less damaged, while the average amount of damage for the entire State did not exceed six per cent.

To prevent damage to seed requires only the exercise of ordinary business intelligence. The seed cotton should never be allowed to lie out in the field. If the farmer is not prepared to gin it when picked he should at least not allow it to be exposed to the weather. But if the seed cotton is

stored under shelter the pile should be opened often and exposed to sunlight in order that the moisture may be dried out. This is especially true of the early picked cotton, but really applies to all. The seed should never be stored in great piles in warm houses when moisture is created and heating and damage follow, and, of course, they should never be left without shelter in rainy weather. Whenever stored they should be opened to the sunlight often. A few simple precautions of this sort would result in the saving of thousands of tons of seed that are wasted every year. I think some of my farmer friends may say that such seed are not wasted because they are used for fertilizer, but in comparison to the value of the seed for milling purposes I must contend that they are wasted. In some parts of the South where they do not use fertilizers the damaged seed are entirely and absolutely wasted.

In order to impress upon you the necessity for properly handling your cottonseed, in your interest as well as that of the oil mills, and to give you some idea of the importance of the great cottonseed crushing industry, I will show you samples of the products that are made from the seed.

To convert the seed into these products over one hundred million dollars is invested in the United States alone, in over eight hundred establishments, employing possibly forty thousand men; these various establishments are located in all parts of the Union, and many others in various parts of the European countries. These industries have increased the foreign trade of the United States over thirty million dollars annually, by the export of cottonseed products, adding to the golden stream constantly crossing the

waters to move the cotton crop of the South, thus aiding and keeping the balance of trade between the United States and Europe in favor of our country, which last year exceeded half a billion dollars. To these magnificent results you farmers of the South are contributing enormously, inasmuch as the value of your cotton crop alone is equal to the balance of trade in favor of the United States.

Beginning with what is known as crude mill products we have crude oil, prime quality, made from prime seed; crude oil, off quality, made from off-quality seed; cottonseed meal, made from prime seed; cottonseed meal, made from off-quality or damaged seed; cottonseed hulls; cottonseed linters.

You will note the difference between the prime and off-quality in these products, due to the quality of the seed from which they are produced.

This crude oil when of sufficiently high quality is converted into edible oils after undergoing refining processes. The off oil is likewise refined, but is used for other than edible purposes. The cottonseed meal, as you all know, is used for stock feed and for mixing with fertilizers. Cottonseed hulls are also used for stock feed. It has been demonstrated, too, that these hulls can be converted into a pulp for the manufacture of rough paper. The linters are used in the manufacture of mattresses, quilts, pillows and various other purposes for which short fibre may be utilized.

I also call to your attention this sample of commercial fertilizer ammoniated with cottonseed meal. I have also here type samples of mattresses, quilts, etc., manufactured from linters. An important use made of linters is in the

manufacture of gun cotton, a highly explosive substance used for all purposes where explosives are needed.

Going back to the uses for prime crude oil, I wish to explain to you that this is refined into what is known as prime summer yellow oil, like this sample. In the refining process the refuse is known as "soap stock," like this sample and which is used in the manufacture of both toilet and laundry soaps. The prime summer yellow oil itself, which can only be made from good seed, is then converted into various edible products, samples of which I will show you as follows: Salad oil, cooking oil, lard compounds, and butterine and oleomargarine, which, as you will observe, are most excellent substitutes for butter.

In the highest grades of what are known to the trade as lard compounds, about ninety-nine per cent. of the compound is pure cottonseed oil, the balance is usually oleo stearine, or beef tallow. A new use for the highest grade refined oils is in ice cream. I am sorry conditions prevent my showing you a sample of that, but it has been successfully and satisfactorily used for this purpose. The soap stock is used, as previously explained, in the manufacture of toilet and laundry soap, such as these samples.

The best grade of cottonseed oil is now used also for medicinal purposes, thus giving to it the highest possible indorsement. Dr. George Brown, of Atlanta, has manufactured and placed on the market an emulsion of cottonseed oil, like this sample, which is used as a substitute for codliver oil. He assured me that it is far superior to codliver oil in the treatment of cases wherever that oil has been used. He states that the majority of people who need cod-

liver oil most are unable to take it because they could not digest it, besides, the taste and flavor are objectionable, which is not the case with cottonseed oil, which is palatable. He says he has never yet seen a patient whose stomach was so delicate that he could not thoroughly digest cottonseed oil.

In order to give you a further idea of the quality of the products made from the seed, I show you here a sample of high-grade cottonseed oil and alongside of it a sample of absolutely pure olive oil, which the world has for generations considered the best of edible oils. This grade of cottonseed oil is equally as good as any olive oil, only we have not idealized it as the growers of olive oil have done. Olive oil, therefore, is preferred by some people only because of its longer use and because in certain countries consumers have become more accustomed to it.

It is almost impossible to detect the difference. So generally was cottonseed oil accepted as olive oil that some years ago it was reported that the olive growers of California petitioned Congress, or through their representative, endeavored to pass a law taxing cottonseed oil heavily for the protection of the olive growers, and it was stated that one of the reasons given for this was that consumers were becoming so accustomed to the taste and flavor of cottonseed oil that in a few years olive oil would be considered adulterated.

Recently the Olive Growers' Association of California published a vicious attack on cottonseed oil. Sam Jones used to say that it was the "hit dog that howled." The animus of the California publication shows that somebody

has been hit and hit hard; and it also shows that the manufacturers of cottonseed oil must expect these sort of attacks and must hold up the product to its present high standard. The farmers can greatly help in this work by more careful handling of the seed, which insures to the consumer of oil a perfect product.

In order that you may appreciate the production of cottonseed oil in comparison with other edible oils with which it competes, I will state that although the olive groves have existed since the time when the "mind of man runneth not to the contrary" while the manufacture of cottonseed oil, is scarcely a generation old it now about equals the production of olive oil, amounting to probably three million barrels annually. The ground-nut, or, as we say in Georgia, "goober," production of oil averages about 250,000 barrels annually, and the Sesame yield about 225,000. In Spain the average yield of oil per acre is about twenty gallons.

While the total olive crop of Europe is about the same as the cottonseed oil crop, the olive crop as well as the other seed and nut crops, are about the same amount every year, showing very little increase. But even without an increase in the acreage in cotton the production of cottonseed oil can be considerably increased by better selection of planting seed and better care in the handling of the seed.

In producing the cotton crop the Southern farmer grows on the same land about half as much oil as the Spanish olive grower and has, in addition, produced from the seed three other important products, all having valuable uses, viz., meal, hulls and linters. The value of the seed and products of cottonseed per acre is about equal to the

(value per acre of the olive crop. The mills have, therefore, taken a by-product of cotton and with it alone increased the productive capacity of the cotton lands in the South by as much as the total productive capacity of the olive groves.

It may interest you to know that during the worst part of the recent financial panic when European exchange even for cotton shipments, could not be negotiated, that the European buyers of cottonseed oil offered to send over gold to purchase seed with which to make the oil for their use. It would be difficult to find a higher estimate of the value of any product than this.

Negotiations are now pending between France and the United States by which this country abates a part of its duty on champagne in consideration of an abatement by France of its maximum duties on cottonseed oil. This shows the high value placed on cottonseed by France, and incidentally, is interesting to Georgians in these prohibition days.

(To further develop the crude cottonseed oil industry it is necessary for the mills to have the strongest possible co-operation of the farmers and producers of the seed. The margin of profit to the crude oil mill is very small. This can only be increased as higher values obtain for cottonseed products, when our own people, and especially our farmers, purchase and use more extensively the products of the crude mill. If they will do this they will put the crude oil mills on a solid financial foundation and at the same time greatly benefit themselves, not only by enabling the mills to pay higher prices for seed, but by getting better products than they are now doing. This consumption has greatly

increased within the last few years, but there is room for further increase, and with the assistance of the farmers who produce the seed the crude mills will be largely independent of speculative markets for oil which tend to the depreciation of this most valuable product.

You have been told time and again about the magnificence of the cotton crop and will be told again, but no matter how often the same old story is told it is as true as the first time it was stated.

When five hundred pounds of wheat crosses the water it sends back to America only about ten dollars in gold. But whenever five hundred pounds of cotton crosses the ocean it sends back to us about sixty dollars of European gold. It is not surprising, therefore, that when the business men and manufacturers of the country needed gold so badly in the recent panic they kept insisting that financial conditions would not improve until cotton moved.

You clothe with cotton a greater part of the world's population than is clothed with any other fibre, and with your cottonseed products you are contributing largely to the support of the population.

The manufacturers of automobiles have shown you how to make horseless carriages and I have endeavored to show you how to make edible oil without olives; medicinal oil without codfish; butter without cows; ice cream without cream; lard without hogs; fertilizers without blood; mattresses without hair; stock feed without corn or oats and explosives without powder, and this has all been done by producing as good or better articles than the originals, and it has all been accomplished with the little seed grown by you on the hillsides and in the valleys of old Georgia.

CHAPTER III.

THE DAIRY AND OIL MILL INTERESTS.

*(Address before the Georgia Dairy Association, Griffin,
Ga.)*

HOW THE OIL MILL HAS BENEFITTED THE DAIRY INTERESTS
AND CATTLE RAISING INDUSTRY—HOW THESE COMBINED
INTERESTS MAY BE FURTHER PROMOTED BY CLOSER RE-
LATIONS.

My friend, Professor Willoughby, invited me to talk to you not longer than twenty minutes on the subject "The Relations of Livestock Owners and Dairymen to Oil Mills." I could talk to you twenty days on the oil mill end of the proposition, but if confined to livestock and dairying I am sure I could tell you all I know in twenty seconds.

I belong to that crowd described by Colonel Starke, of Mississippi, as being "too poor to keep a cow and too proud to milk a goat." The nearest I ever came to being a stock raiser or dairyman was when I used to hold the calf off for some one else to do the milking, and then the calf didn't seem to think that I was doing much toward his raising. But this has been so many years ago that I have almost forgotten what a cow looks like.

Most, if not all, of you livestock breeders and dairymen are farmers also. Perhaps I know just a little more about farming than about raising livestock. For ten years I was Secretary of the South Carolina Department of Agricul-



Cartoon, "Getting Together."

ture, during which time I studied agriculture as closely and as thoroughly as my clerical duties would permit. When I graduated from that department and went into oil milling I had learned enough about farming to know how many tax tags it required for a ton of guano. All that I have learned about farming since then is that cottonseed meal ammoniated fertilizers are the best for Georgia soils and Georgia crops. Notwithstanding my ignorance about stock raising and farming, I hope in the time allowed me to show you that our relationship is a very close one that we have so many interests in common that we can trace our relationship without the aid of a pedigree.

We believe that the oil mills by producing the best stock feed ever made, dairying and stock raising in the South will be possible and we hope profitable. These products have placed the live stock interests of the South on a plane with the live stock interests of the West. By using cottonseed meal and hulls you have helped the mills. We are more or less dependent on you and you are partly dependent on us. When a live stock raiser or a dairyman is a farmer also it is always to his interest to exchange his seed with the mills for meal and hulls. The mills are always anxious to do this and by such exchanges both parties are benefitted. These exchanges can be made on a basis of pounds or on the cash values of seed and meal and hulls at the time of the exchange.

A pamphlet recently published by the National Department of Agriculture, gives the result of experiments in the use of raw seed and meal in fertilizing land, which shows that it is a great deal better to use the meal than the seed

for this purpose. Comparatively few seed are fed to cattle and in most cases this is only when the seed are too far from railroads to be hauled. I believe it is pretty well established that the meal and hulls as a feed for stock are far superior to the raw or cooked whole seed.

I assume, of course, you all know that cottonseed meal and hulls make the best stock feed in the world, but it may not be improper for me to tell you something about what other people think of it.

The government special agent, Mr. Benton, appointed from Georgia to travel through the Netherlands, Denmark and other European countries, reported that at every point visited he found cottonseed meal in high favor with all stock raisers of those countries.

At the famous Trifolium dairy in Denmark, 15,000 head of milk cows are fed on cottonseed meal. In all parts of the South and throughout New England cottonseed meal is the most popular of all dairy foods, and in actual feeding value it stands at the head of all American feed stuffs.

Judge Hammond, of Augusta, has demonstrated that when properly used it is the best feed for horses; while Mr. Allison, of Texas, has proven beyond question its great value for fattening pigs.

Danish bacon, famous all over Europe for its delicacy of flavor, is said to be made from hogs fattened on cottonseed meal. It seems, therefore, that as a feed for all animals this product has proven entirely satisfactory.

In the South we are fortunate in having cottonseed hulls, which the other countries have not, and which, when added to the meal in proper proportions, makes a complete ration.

I cannot impress upon you too strongly the fact that the interests of the stock raisers, dairymen, farmers and oil mills are mutual. As a matter of fact the mills work largely on a toll basis, just as the corn mills do. They figure on the cost of seed, cost of working and the value of the products, leaving a margin for reasonable profits. Sometimes they have obtained these profits and sometimes not. But during the operating season they try to make such a difference between the cost of the seed worked up and the value of the finished product as to give them only a fair profit. As the greater part of the dairy products and beef cattle of the South are consumed at home the two interests should in every possible way work together.

In a recent conference with representatives of the Southern Cotton Growers' Association the values of seed were discussed with representatives of the Interstate Cottonseed Crushers' Association. The quality of the seed from North Carolina to Texas was considered along with the yields, cost of working, freight rates, quality of the products and other matters of the same kind, and it was unanimously decided that owing to the varied conditions in the different sections of the State that no definite value could be fixed on seed so far as the oil mills are concerned. But the representatives of the Southern Cotton Growers' Association recognizing the importance to the farmer of increasing the value of cottonseed products decided that they would advocate personally and through their association an increased use of all cottonseed products by the farmers themselves, substituting entirely cottonseed oil and compounds made from it for hogs' lard and meal and hulls for

wheat bran, corn meal, hay and other products hauled from the West.

The total production of seed in the South on a basis of 13,000,000 bale cotton crop is approximately 6,500,000 tons. If 3,000,000 tons are used for all other purposes it will leave about 3,500,000 tons for crushing. If the products from these seed were used at home it would increase the dairy business and cattle raising, which would be followed



Six Horses and a Mule, Which Get a Daily Ration of Cottonseed Meal.

by the establishment of packing houses, adding another great industry to this section. When all cottonseed products are used in the South, as will be done some time, it will increase the commercial value of cottonseed and consequently add largely to the value of the cotton crop.

We are now exporting to Europe about one-third of the production of cottonseed meal and one-third of the cottonseed oil produced, and we ought not to export a single pound of meal or a single gallon of oil.

Some years ago there was a flourishing industry in the United States in which the dairymen and the oil mills were mutually interested, but which through national laws has practically been wiped out of existence. This was the manufacture of oleomargarine. For this product you furnished the milk and the oil mills furnished the oil. You probably feel about oleomargarine as the South Carolina editor did who said it was a "horrible thought to him that as good butter could be made out of the fat of a steer as from the milk of the most beautiful Jersey in the South." That was sentiment with him, but with the oil mills and the dairymen it is a business proposition. So far as I know there is no movement on foot to repeal the oleomargarine laws, but it may be well for our dairymen to consider whether or not the repeal of these laws might not be beneficial to them instead of harmful. There is no question about the purity and wholesomeness of oleomargarine when properly manufactured. It furnishes a good substitute for butter at a price within the reach of the poorest people and is good enough for the richest. By the use of cottonseed meal and hulls and by such produce as is raised on the farms there is no question about the ability of our dairies to produce large quantities of milk at a reasonable cost.

There seems to be some question about whether or not the manufacture of butter at our dairies is profitable. In the manufacture of oleomargarine sixty per cent. of the weight is milk, the balance is cottonseed oil and beef stearine. The establishment of an oleomargarine factory at some central point would give an enormous demand for milk which necessarily would increase its value. Would it

be better for you to sell milk and create a large demand for it at better prices than you are now getting, or to manufacture butter?

Holland is the largest butter making country in the world. Holland also takes the largest amount of cottonseed oil exported from America. That country is also the largest manufacturer of oleomargarine. As far as I know there is no antagonism between the butter makers of Holland and the manufacturers of oleomargarine; they apparently work together for their mutual interests, and the dairymen do not object to the oleomargarine factories which consume large quantities of milk. If that country



Colt Three Hours Old; Dam Fed on Cottonseed Meal Regularly.

can import from America \$1,000,000 worth of cottonseed oil annually and make a profit on it, it seems that we should in this country utilize that oil and keep the profit at home. It is plain that one pound of pure odorless cottonseed oil added to three gallons of milk in the churn will produce from one pound to one and one-fourth pounds of butter as pure, as sweet and as delicious as the best Jersey butter ever made. But, under the oleomargarine laws the sale of such product is prohibited. If oleomargarine was unwholesome there would be absolutely no argument in its favor and its manufacture should be prohibited, even if it was a great benefit to the dairymen or to the oil mills if it was manufactured. But there is no question about its wholesomeness and it is certainly the best substitute for butter ever discovered.

A gentleman said to me some time ago that as the Western butter makers realized that they can increase their butter production by the use of oil costing from $5\frac{1}{2}$ to 6 cents per pound and sell it for 25 to 30 cents per pound they would be the first to advocate a repeal of the law which through their influence was enacted by Congress and which practically destroyed the oleomargarine industry in this country.

I have already consumed more than twenty minutes of the time which I promised to talk to you, and only wish to say in conclusion that I appreciate this opportunity of advising with you and I am mighty glad to be with you. You all look happy, rich and prosperous and I am sure that much of your prosperity, wealth and happiness is due to the free use you have made of cottonseed products.

CHAPTER IV.

GEORGIA PEOPLE BUY COTTON OIL IN PREFERENCE TO HOGS' LARD,

THE SUPERIORITY OF COTTON OIL OVER LARD.

They were discussing in the Piedmont lobby the big corn and hog crop of the West and finally got on the relative value and purity of vegetable oils and animal fats. One Western man had said a great deal about the big corn crop and the thousands of fat hogs that it would make and how his firm expected to supply the cotton growers of the South with lard this year. He was rather sorry for the Georgians because they did not have more hogs, but glad on his own account, as the South would give his firm a market for their surplus product.

A cotton oil man, sitting in the group, observed that he thought the South was raising its own lard this year in the shape of cotton oil. The Westerner replied: "They will never use it. There is too much prejudice against it right here where you raise it." The oil man answered: "Prejudice! Prejudice against a pure vegetable product! Prejudice against one of the most delicious of nature's products! Why, do you know how completely and delicately nature has provided for the care of the oil in the cotton seed? In every seed are thousands of oil cells, each containing a tiny sack holding an almost infinitesimal globule of oil. These little sacks are elastic, prevent evaporation and make it im-

possible for the precious liquid to become contaminated by contact with any other substance. All of these little cells are then completely encased in the kernel of the seed, and all safely housed and covered tightly with a hard shell impervious to rain, hail, sunshine, disease or insects. So carefully protected by nature is the oil that it can only be released by heat and pressure. When ready for market it is pure, sweet, wholesome, almost snow white, and of delightful flavor. The mills are selling it to consumers, who bring their seed to the mills and carry back refined oil.

"If there is anyone in Georgia so lacking in good judgment and good taste as to prefer animal fat of any kind to cotton oil, such a citizen must live a long ways from the public road, and if anyone still talks about prejudice against cotton oil, he is simply making himself ridiculous.

"When Georgia grows 2,000,000 bales of cotton in a single year and becomes the second largest cotton producing State in the South, her people would not be showing the sound judgment that has made Georgia the Empire State of the South if they did not consume their own products in preference to those produced elsewhere, particularly where they are so far superior to the imported article."

The argument seemed to be exhausted and the discussion drifted on to crops and politics.—Atlanta Constitution, September 24, 1905.

CHAPTER V.

A REVIEW OF THE PROGRESS AND DEVELOPMENT OF THE COTTON OIL INDUSTRY.

NEGLECTED OPPORTUNITIES—A SOUTHERN MONOPOLY—A GROWTH AS SENSATIONAL AS THE CALIFORNIA GOLD DISCOVERY OF '49—THE VALUE OF THE BY-PRODUCTS TO THE SOUTHERN CATTLE RAISER AND DAIRYMEN.

"If the United States had, twenty or twenty-five years ago, followed up the admissions of European olive oil experts, that they could not detect one-third cottonseed oil in their best olive oil and pushed the matter to its just conclusion, viz: That cottonseed oil was as pure and wholesome—although in itself lacking the peculiar flavor of olive oil—as the best olive oil, the United States would not to-day be able to meet the foreign demand which would have been created therefor."

"The fact that Germany, Denmark and the United Kingdom import over \$12,000,000 worth of United States cottonseed oil cake is evidence enough as to its worth, for they are the expert cattle feeders of the world."

The two paragraphs quoted above are from the Daily Consular and Trade Reports of the United States Department of Commerce and Labor, October 9, 1906, and no other evidence is needed to prove the value of these two chief products of the cottonseed industry of the South, nor is further evidence needed regarding the importance of the

foreign trade in these two products, except to state the actual figures as shown by the same report.

The total value of the oil exported for the year ending June 30, 1905, was \$13,673,400; lard substitutes (compounded with cottonseed oil), \$4,154,200. The exports of cottonseed oil cake amounted in value to \$13,073,400, and of linters to \$1,433,925, making the total exports of cottonseed products, exclusive of the oil exported in oleomargarine, \$32,334,925.

It may be some time before the South monopolizes cotton manufacture, but natural conditions, followed by mechanical ingenuity and commercial activity have already established a monopoly in the South in the manufacture of high grade cottonseed products.

The cottonseed industry of the South is unique, because it is "alone of its kind," especially when the diversified interests concerned in it are considered.

Its history is interesting; its development as sensational as the California gold discovery of '49. Its only set back and the greatest financial danger it has encountered thus far, has been its too rapid growth, production running ahead of consumption, and crushing capacity exceeding the supply of the raw material, at prices that the producers could pay for seed on the market value for the oil, and this danger might have been averted, as has been shown, if those interested in it twenty years ago had made the proper effort at that time to push the sale and use of the oil in foreign countries.

So rapid was the increase in the number of crude mills in a few years that refiners did not find markets for the fin-

ished products, cooking oils and compounds, as fast as the production of crude oil increased; consequently, the mills were forced to depend largely on the limited number of European buyers to take their surplus refined oil, and these buyers knew well how to buy on congested markets. This



Cargo of Cottonseed Meal Fertilizers on Chattahoochee River.

has resulted in some years in serious loss to the entire industry, refiners and manufacturers of crude oil as well. This condition seems to have passed, at least it has improved, and while the profits have averaged less than the average profits of other manufacturing establishments, particularly in recent years, more stable conditions seem to have been reached, and better, broader and sounder judgment displayed in the handling of the business.

Until about six years ago the producers of crude oil depended largely on Eastern and Western refiners for their

markets. About half of the oil was then, 1900, exported after being refined, out of a total estimated production of 1,500,000 barrels. In 1900 a large number of crude oil mills were purchased by Southern refiners, and then followed an increased production of the finished products and an increased domestic and home use of the products. In 1905 only about one-third of the oil was exported against one-half in 1900, although the total estimated production had increased to about 3,000,000 barrels, making the domestic consumption about 2,000,000 barrels against 900,000 barrels in 1900, thus doubling the home demand for it. This increase in the home use of oil gave a tremendous impulse to the manufacture of crude oil and in the two years following the number of mills in the South almost doubled.

The increased use of the oil by Southern manufacturers of finished products strengthened both foreign and domestic demands for it, the development running on much the same lines as the result following the increased manufacture of cotton by Southern factories. It has been further helped by the general prosperity of the country in all lines of manufacture, the improvement in agricultural conditions, and the better buying ability of the people generally. If the mistakes of the past are not repeated, if production is allowed to run parallel with consumption, the demand for all cottonseed products will soon enhance the values and the industry will enjoy the same degree of prosperity that has come to all other similar enterprises.

The products of this industry compete with the olive growers of Italy, Spain and France, with the producers of copra of the Pacific islands, with the cocoanut, peanut and

sesame oil manufacturers of Europe, with the packers of the world, with the butter makers of Europe, with the Western growers of corn and hay, with the hog raisers of the same section, and, in a limited way, with the European growers of low grade cotton and cotton factory waste. They also compete with the manufacturers of soap of all kinds, wherever located. Not only do the products of the cottonseed mills and refineries compete in foreign markets with the commodities mentioned produced in those sections, but they also are forced to meet the competition of American manufacturers and producers of similar commodities in foreign and domestic markets. It is not surprising, therefore, that the development of this industry has been retarded because it met with so much opposition from so many different and conflicting interests.

The Interstate Cottonseed Crushers' Association, through its publicity bureau, is trying to correct the mistakes and injury done the industry twenty-five years ago, by failure to take advantage of foreign markets, as explained in the consular reports referred to, by more fully advertising these products and thus creating a greater demand abroad and at home, which would already have existed if the proper course had been followed by those controlling the industry in its early history. In this work the publicity committee is receiving the cordial co-operation of the Bureau of Manufacturers, Department of Commerce and Labor at Washington, D. C., the assistance of the trade journals and the newspapers generally throughout the United States and of the members of the association. It is believed that a better knowledge of the value of these prod-

ucts will not only increase the demand, but will result in more remunerative prices to both refiners and crude oil mills.

A recent report of the Bureau of Statistics, Department of Commerce and Labor, says: "The value of cottonseed oil as a food product was not known in the early days of its manufacture. In 1881 it was discovered that cottonseed oil mixed with animal fats made an acceptable substitute for lard. From that time the domestic demand greatly increased. In 1880 about thirty per cent. of the cottonseed oil manufactured in the United States was consumed at home, while in 1905 it amounted to sixty per cent."

It has also been "discovered" that the oil in its natural state is a satisfactory substitute for lard and other animal fats. The demand for it as a cooking commodity is increasing daily. Its purity and wholesomeness is attested by the chemists, and practical experience supports the expert testimony.

Recently a great deal of interest has been aroused on account of an address delivered by Professor Connell, on the value of cottonseed meal as a human food and competent authorities have announced that this is entirely practicable and that we may expect a large addition from this source to the food products of America.

For one hundred and eighty years mills for crushing cottonseed have been operated in Europe, but the differences in the character of the products of these mills and those of the South are almost as great as the differences between woolen and cotton goods.

In the South the seed are worked directly from the fields;

in Europe they are transported from Egypt and America, reaching the mills many months after shipment. The products are necessarily inferior to those of Southern mills. The manufacturing methods, too, are not the same. In China, for possibly two thousand years, oil has been expressed from cottonseed, and is still produced by primitive



Exterior View of Large Cotton Oil Refinery.

processes, consequently it also is far inferior to the Southern product.

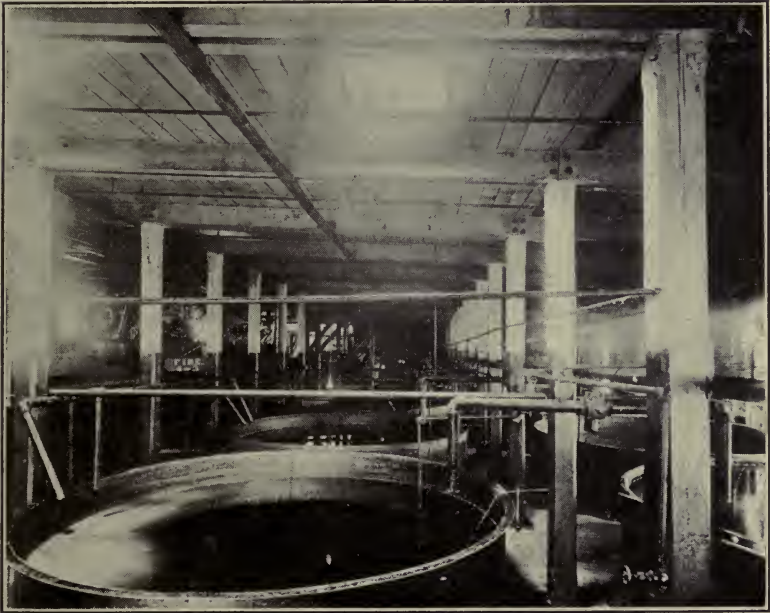
The Southern industry is, therefore, unique in that it "stands alone" in its methods of manufacture and in the quality of its product. It is just as complete a monopoly of its kind as the American production of Sea Island cotton. The feeding and fertilizing value of the meal produced in the Southern mills is just about double that of the same commodity manufactured in the English mills. The world looks to America, therefore, for its high grade cottonseed oil and high grade cottonseed meal. But with all these advantages the South does not derive the full benefit from the

business, because a large part of the total annual production of the cake or meal goes to foreign markets, probably half of the linters (short fibre) is also exported. The meal and hulls are needed for stock feed, in order to increase the number of beef cattle, milk cows and hogs in the South. In no other way can packing houses be so successfully established and the dairy products increased in this section as by the use of cottonseed meal and hulls. When all of the cake or meal and all of the linters are used where produced—and that now seems probable in the near future—the full benefit of the industry will be realized by the people who own it, and by those who grow the seed.

The total production of cake or meal is about sufficient to feed more than 1,000,000 head of beef and dairy cattle the year round, while the hulls would supply roughage for 250,000 cattle for one year. If 1,000,000 head of cattle were fed on the meal and hulls and the deficiency is roughage supplied by native grasses and hay, then the hulls and meal would supply 1,000,000 cattle for the entire year. As fattening cattle are usually kept for only about six months on food of this sort before being marketed, the supply of meal and hulls supplemented with native grasses and hay would supply 2,000,000 head of beef cattle for that time. Such a use of these products would create packing houses throughout the South and add another important industry to this section that would be of immense benefit to the whole people.

All of the hulls are now fed in the South to beef and dairy cattle, but a large part of the meal is exported or used in the manufacture of commercial fertilizers. This

partial loss to the South of the most valuable feed stuff produced in any country shows a lack of appreciation and of enterprise that should not exist and will not continue many years, as the value of the meal for feeding purposes is better known each year.



Interior View of Large Cotton Oil Refinery.

The industry has had to combat the prejudices of its own people and the opposition of every competitor in every market of the world. Sometimes the national government of its own country, and even the governments of its own States have been arrayed against it. The manufacturers of lard first opposed its chief product and were followed by the butter makers of the West, while the French, German,

Austrian and Italian governments tried to prohibit by high tariffs, the sale of the oil in their own countries, but seem to have succeeded only in increasing its use. In spite of prejudice, opposition and imposition at home and abroad, the high merits of cottonseed oil carried it through all these difficulties, and to-day the demand for it is better than at any time in its history; while the use of the meal and hulls has about doubled in six years.

So the industry seems to have overcome all opposition triumphantly and has worthily won the world's recognition as one of the great manufacturing interests of the country, and wears its honors becomingly.

In the further development of the industry the trend is southward where the cotton grows. Here the crude oil is produced, here it can be refined while it is sweet and pure, fresh from the fields and the seed. With the establishment of commercial exchanges in the leading Southern cities and the coming of immigrant ships direct to Southern ports, the trade with Europe will naturally come this way and this will lead foreign dealers and brokers to look to Southern producers of finished products for their supplies.

CHAPTER VI.

ENGLISH AND AMERICAN COTTONSEED MILLS.

COTTONSEED MEAL IN DENMARK AND THE UNITED STATES—
THE HIGH QUALITY OF AMERICAN COTTONSEED OIL—THE
VALUE OF VARIOUS AMERICAN FEED STUFFS, INCLUDING
COTTONSEED MEAL AND HULLS.

In England where cottonseed mills have been in operation for one hundred and eighty years, they are known as cake mills because the cake is largely used for cattle feed, and is highly regarded by feeders for this purpose, large quantities being imported in addition to that produced at home, while in the South they are known as oil mills, because the oil has been regarded as the most valuable product. The English cake, in feeding value, is worth only about sixty per cent. of the American cake. The oil is also inferior to the American product, because the seed are crushed whole, all of the hulls going into the cake or meal, and the seed are brought from Egypt or America, consequently they are never sweet and fresh like the seed worked straight from the cotton fields by the American mills.

Although the English products are inferior to those produced in the South, they sell for much higher prices because their value is better understood and appreciated by the consumers.

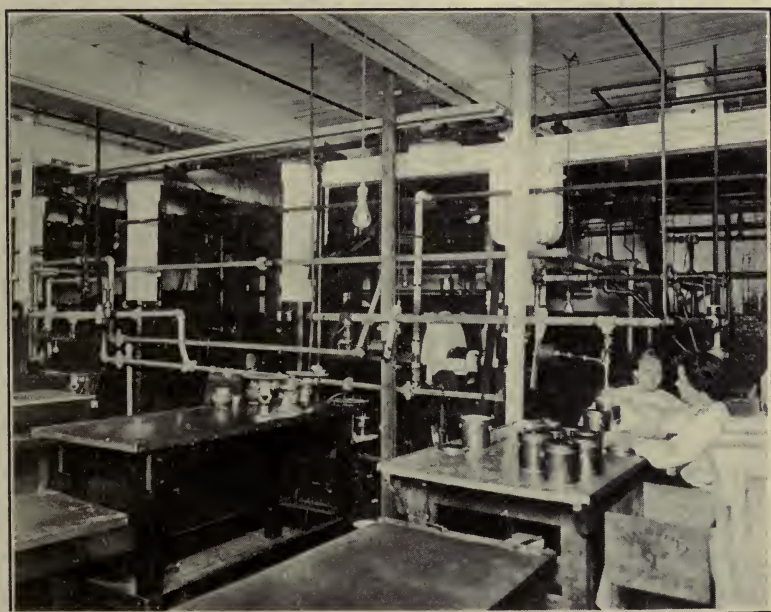
Last year the sunflower crop of Russia was almost a failure. When this was realized the stock feeders in Den-

mark, where large quantities of sunflower cake is used, entered the American markets for cottonseed cake, which they had been using in limited quantities previously. The Danish buyers were followed shortly by the German and English feeders, which caused a sharp advance in price, amounting to something over \$5 per ton. Cottonseed meal landed in Denmark, including freight, insurance, brokers and jobbers' commissions and profits, probably cost the feeders \$35 per ton, while the highest price it reached in the South in a retail way was \$28 per ton, and only a small quantity sold at over \$25 per ton. This export demand greatly assisted the mills in realizing a better price for cottonseed meal than had prevailed in many years. Indirectly it was a great benefit to the growers of seed, because it enabled the mills to pay better prices for seed, but even at the price named, the meal sold at only about seventy per cent. of its actual feeding value in comparison with other feed stuffs. A product so valuable for feeding purposes should never be used any other way. If all of the cottonseed meal produced in the South was fed to cattle, it would result in making this section a cattle raising country, and would create a packing industry equal to that of the West. This has been demonstrated by an enterprising citizen of Atlanta, Ga., who started a few years ago feeding cattle in a limited way on cottonseed hulls and meal. Meeting with much success he established an extensive packing house, and now supplies a large part of the meat products consumed in this section. While cottonseed meal is the best commercial fertilizer ever produced, it is too valuable as a feed stuff to be used for other purposes.

THE GREAT
COTTONSEED INDUSTRY
OF THE SOUTH

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The oil is the most valuable of all of the products of the American mills. Its purity and wholesomeness recommend it for cooking purposes or for salads. It is more economical than any animal fat, and, on account of its purity, is necessarily healthful. It is a vegetable product produced from a seed that is protected by nature from imperfections



Interior View of Cotton Oil Hogless Lard Plant.

of any kind, and is made entirely by machinery, while the seed are still fresh, sound and sweet, and is refined by the most approved methods. *The United States Board of Official Chemists at Washington has classed it with olive oil without discrimination.* The high-grade deodorized cooking oil, manufactured from fresh, sweet cottonseed, is odor-

less, tasteless and practically colorless, and is produced without the aid or use of any injurious chemicals. One pound of oil of this kind is equal to one and one-third pound of hog's lard for cooking purposes.

Comparative statement of values of the various feeds expressed in calories:—

				Feed value, calo- ries per pound.
	Protein.	Fiber.	Carbohy- drates.	Fat.
Cottonseed meal...	38.6	6.0	34.4	8.0
Feed meal.....	25.0	20.0	36.0	6.0
Brewers' grain....	19.9	11.0	51.7	5.0
Corn	10.5	2.1	69.6	5.4
Cow peas.....	16.6	20.1	42.2	2.2
Oats	11.8	9.5	59.7	5.0
Linseed meal.....	32.2	9.2	38.4	3.0
Wheat straw.....	3.4	38.1	43.4	1.3
Oat straw.....	4.0	37.0	42.4	2.3
Red top hay.....	7.9	28.6	47.5	1.9
Cottonseed hulls...	2.5	46.0	36.0	1.0
Timothy hay.....	5.9	29.0	45.0	2.5
Red clover.....	12.3	24.8	38.1	3.3
Corn fodder.....	4.5	14.3	34.7	1.6

CHAPTER VII.

HOW TO INCREASE THE VALUE OF COTTONSEED PRODUCTS.

*(Address before the Inter-State Cottonseed Crushers' Association annual meeting at New Orleans, La.,
May 16, 1905.)*

SOME RESULTS ACCOMPLISHED BY PUBLICITY.

A gentleman of long experience in the oil mill business said to me recently, that whenever the mills have an unfavorable season they go around looking for a Moses, but at the same time they are always ready to make suggestions for the consideration of the Moses in case he should be found.

In this spirit several interesting suggestions were made during the recent crushing season, looking to improving conditions.

One suggestion is that the mills shall establish co-operative refineries and refine and store oil until the market is satisfactory to the producer, and another plan proposed is that the crude mills shall stop crushing seed, and hold the oil on hand until the production only equals the demand.

Both of these suggestions seem to have been based on the idea of over production. The remedy offered for this condition is that less oil should be produced.

This idea seems defective, first because oil was the only product considered, and second because storing a product,

waiting for a demand might result in serious loss, while the closing down of the crude mills without making proper effort to better these conditions otherwise, might impair the value of the investment.

Entertaining the hope that a Moses will appear, if needed, I submit the suggestion that it is better to increase consumption than to curtail production, and to justify this plan the home demand for our product must be increased.

Our industry is closer than any other to the farmer who sells us his seed. In a measure, we work on toll for him just as the corn mill does. He is not now our largest customer, but he should be. The farmers of the South need all of our products and we need their surplus seed. Whenever we can pay good prices for seed, we realize proportionate prices for our by-products. An unfavorable feature of the business is that we do not sell enough of these products to the parties who sell us their seed. They are our best customers for what they buy, and we should show them it is to their interest to buy more largely.

Twelve years ago at Atlanta we sold our meal to fertilizer companies or exported it. At the same time we used hulls for fuel. At this time about three-fourths of our meal is sold to feeders and dairymen, and we are unable to supply the demand for hulls from local production. The demand has been created by hard work among the farmers and dairymen. If similar efforts were made in other parts of Georgia, and the South, we should have very little surplus meal and hulls, and if any cake or meal was exported, it would bring satisfactory prices.

Our agricultural experiment stations should be induced

to take greater interest in oil mill products. Besides making practical experiments, and advertising results, they should employ lecturers to address the farmers' institutes on the value and use of meal and hulls, and thus keep them constantly before the people. If the mills would follow up this work with exchanges of meal and hulls for seed, they would greatly enlarge their home market.

Marketing oil is not so easy a proposition as marketing the by-products, but the home use of it can be increased.

Our friend, Mr. Jo Allison, and our secretary, Mr. Robt. Gibson, have shown that a pound of high grade cooking oil, added to three gallons of milk in the churn, will add more than one pound of fine butter to the yield. This field is unlimited. Mr. Allison says that one million gallons of milk are churned every day in Texas. If to every three gallons of milk, one pound of oil was added, we would have a market in Texas alone for our surplus oil.

At one refinery in Mississippi about 1,000 barrels of oil are sold annually to local consumers. If each of the crude mills in the South sold one-half as much, they would take from the market the biggest surplus the trade has ever known. In Georgia we have recently established a retail trade for the cooking oil at many of the crude mills, and although this has been in operation only a few weeks, the result is most encouraging.

While much of what is here outlined may be accomplished by individual effort, it can be greatly expedited by proper organization. Every state in the South should have State Crushers' Associations. These organizations should co-operate with the manufacturers of oleomargarine, who

it is understood will work for a repeal of the oleomargarine law. These associations should assist in every effort to promote friendly foreign relations in our interest, and prevent unfriendly domestic legislation, and should devise means for the proper advertising of our products among our own people.

State associations are necessary to make more effective the rules governing the sales of products adopted from time to time by the Inter-State Crushers' Association and by the commercial organizations interested in our trade. Many of the disagreements growing out of transactions between the mills are due to a misunderstanding of the terms of the trade and the rules which were made.

Properly managed, the great industry is of immense benefit to the South. It should be encouraged in every legitimate way.

Let us get together and forget the little troubles we have and take a bigger and broader view of the whole situation, and turning our eyes to the future, work on the principle of the "Georgia Gospel" as expounded by that sunny hearted Georgia poet—Frank Stanton:—

"No use in grievin'
'Bout the milk you spill;
Keep on believin'
That the cow'll stand still."

CHAPTER VIII.

SOME INTERESTING FACTS ABOUT COTTONSEED OIL.

HOW IT MASQUERADED UNDER DIFFERENT NAMES IN DIFFERENT COUNTRIES—HOW IT WAS MIXED AND BLENDED WITH OTHER AND INFERIOR PRODUCTS—HOW IT WAS FINALLY PUT ON THE MARKET UNDER ITS OWN NAME AND TRIUMPHANTLY WON ON ITS HIGH MERITS.

The manufacture of cottonseed oil is a peculiar industry and while all other manufacturers have enjoyed some kind of protection from the government, this has lived in spite of governmental opposition and without assistance from the government. For many years during the growth of this infant industry it was satisfied to live under many *nom de plumes*. As the sweet New England songster, the bobolink, delighted the musical artists of New England and afterwards pleased the palates of the epicures of Charleston, as the rice bird, so cotton oil was willing to become olive oil in Spain, peanut oil in France, cocoanut oil in the Philippines, sesame oil in Africa, lard oil in Chicago, corn oil in Cincinnati, hog lard oil all over the world, butter in the Jersey Islands, and still remain the cottonseed oil of the South.

Finally its aristocratic brethren, the olive growers of Europe, appealed to their respective governments for protection against this invader, which had become more popular than themselves in their own countries. They succeeded in having almost prohibitive duties levied upon it when ex-

ported. This was pretty hard, but when the government of the United States prohibited the manufacture of oleomargarine, cotton oil found itself without friends in any of the governments of the world and opposed by its own government. It concluded that it was time to throw off all disguises and stand in its own right and on its own merits before the world. It was then converted into cottolene and advertised as a cotton oil product and under this name its popularity increased. In Georgia, at Savannah, it enters into the composition of Snowdrift, one of the purest and best of compounds, and into Flakewhite at Macon, and it has proven to all people that these products are wholesome and free from diseases common among swine. It now spurns any connection with hog fat. It no longer masquerades under the name of any foreign oil. In Savannah it is Wesson Snowdrift oil, good for cooking and salads, and competes with the best olive oil and butter.

So popular has cottonseed oil become for edible and culinary purposes that the handful of olive growers in California once declared that the palates of the people had become so accustomed to the flavor of cotton oil, that they had come to regard the pure olive oil as adulterated.

Some of our own Southern State legislatures passed laws against the use of cotton oil in the manufacture of butter substitutes, for the protection of the few dairymen who make Jersey butter. Since the manufacture of oleomargarine was practically prohibited by national legislation, many of the best hotels of the country have been flooded with a renovated rancid butter, disgusting to the palate and not wholesome to the stomach.

CHAPTER IX.

A GENERAL REVIEW OF THE COTTON OIL INDUSTRY.

(Annual address before the Inter-State Cottonseed Crushers' Association, Louisville, Ky., May 19, 1908.)

THE WORK OF THE INTER-STATE COTTONSEED CRUSHERS' ASSOCIATION FOR THE YEAR 1908—THE CONDITIONS AFFECTING THE INDUSTRY—ITS IMMENSE POSSIBILITIES—THE CO-OPERATION OF THE NATIONAL GOVERNMENT IN PROMOTING ITS INTERESTS—THE FOREIGN TRADE—OLEOMARGARINE—GRADING COTTONSEED—PUBLICITY BUREAU—EXHIBITS OF COTTONSEED PRODUCTS.

When you met at Jamestown a year ago you had just closed a fairly successful operating season. You were able to submit balance sheets to your stockholders showing reasonable profits on their investments. If the result this year is not as satisfactory as last it is due to causes largely beyond your control. You can at least congratulate yourselves upon having ended a phenomenal season without serious loss, following financial conditions that closed banks, forced railroads into receiverships, and overwhelmed many other industries, while no actual failure of cotton oil mills has been reported and the future of your business is exceedingly promising.

The acreage in cotton this year, with good crop conditions, insures you the raw material needed, and the in-

creased demand for your products is the best guarantee of future sales.

THE FUTURE DEMAND FOR COTTON OIL.

There is little probability of an increased production of olive or other vegetable oils in Europe. The increasing population of the world provides for any probable increase in the production of cotton oil, and the Eastern markets opened to this product last year are among consumers who do not use animal fats. As the seasons go by the merits of this oil become better known, and it must necessarily supply the shortage in the world's requirements.

If you think that I am too sanguine regarding the future demand for your oil I refer you to the flood of reports coming from United States consuls regarding conditions in foreign markets. I quote only a few :

Consul James E. Dunning, Milan, Italy.—“Short crops are bound to occur in Italy every few years, while the prospects for the general normal trade in cottonseed oil is promising in the extreme. The prospect for future development of the trade is excellent. Cotton oil has become nearly indispensable to the Italian market.”

Consul Paul Nash, Venice, Italy.—“Even under the best conditions Italy cannot produce edible oil enough for home consumption, plus the demand for olive oil abroad.”

Consul-General Frank H. Mason, Paris, France.—“The use of cottonseed oil for cooking purposes is increasing rapidly not only in France, but in Italy and other European countries.”

Consul-General Skinner, Marseilles, France.—“The

worldwide need of oils and greases goes on increasing, while the raw material areas are known, limited and subject to no systematic effort toward enlargement."

Consul-General Ekehl, Germany.—"American cottonseed oil is used extensively here."

Consul William Harrison, Bradley, England.—"There is a large and increasing use of cottonseed oil here."

Consul-General Loren Listoe, Netherlands.—"Cottonseed oil is imported and used in the Netherlands in great quantities."

Consul Frank B. Hill, Holland.—"Imports (of cotton oil) are increasing every year and are almost exclusively from the United States."

Consul George M. Hotschick, Austria.—"Cottonseed oil—hundreds of thousands of barrels of which are consumed—cannot be produced either in Austria or in all Europe and is not in any way to be replaced."

Consul Felix S. S. Johnson, Switzerland.—"Each year shows a marked increase in cottonseed oil importations."

Consul Jesse B. Jackson, Syria.—"The importation of the products of cottonseed oil is increasing very rapidly."

Consul-General G. E. Anderson, Rio de Janeiro.—"As between olive oil and cottonseed oil, conditions generally, including tariff rates, are decidedly in favor of the cottonseed product."

No further evidence is needed to prove that the high quality of your oil and the demand for it have been firmly established in the markets of the world, and especially in the olive-growing regions. The puny attempts of a few olive growers in California to discredit cottonseed oil may be

compared with a Florida zephyr trying to stop a Texas tornado.

Not only has cottonseed oil proven its superior quality, taking its place alongside the best grades of olive oil, but your chief by-product, cottonseed meal, is finding new uses in foreign and domestic markets, which means a demand at fair prices for any production that may reasonably be expected.

Conservatism in your business and persistent advertising of your products will secure you fair, just and reasonable returns on your labor and investment for the coming season.

THE OBJECT OF THE ASSOCIATION.

In some sections of the South conditions other than financial have made the business unsatisfactory, but an improvement may be expected even in this respect in the near future. There are no irreconcilable differences between the refining and the crude interests; none should be allowed to exist and none possible do exist between those who are members of this association.

In discussing the sentiments and purposes of the United States toward the South American republics Secretary Root used words that will define the objects and purposes of this association. He said: "We desire to increase our prosperity; to extend our trade; to grow in wealth, in wisdom and in spirit; but our conception of the true way to accomplish this is not to pull down others that we may profit by their ruin, but to help all friends to a common prosperity that we may become greater and stronger together."

Membership in the association will, as Secretary Root again says regarding trade, "establish kindly and agreeable personal relations which are so potent in leading to business relations."

Those interests you represent here, whether your own or others, are best served by contributing to the success of this association that has already accomplished so much good for the industry and, by reason of what it has already accomplished, is in position to increase these benefits many times over in the future.

You have left your homes and come to this meeting for a serious business purpose; you are earnest business men; you have come to serve the highest and best interests of the industry you represent, and you will do this with fidelity and loyalty. The pleasure and entertainment that our Louisville friends have prepared for us will be thoroughly enjoyed and appreciated and will contribute, in a large measure, to the success of the work you have come to do. Like the dressing to the salad, it will make better the serious part of the program.

COTTONSEED PRODUCTS IN FOREIGN MARKETS.

As a rule the values of all commodities are governed by the markets where the surplus is sold. Recognizing this fact, your officers have endeavored to maintain those foreign markets already secured for your products, and to increase the demand in those countries where about one-third of your products are now sold, and to create new ones, realizing that conditions existing there reflect and react upon your home markets.

Two years ago, under President Bailey's administration,

the State Department at Washington, co-operating with the Department of Commerce and Labor, was induced to call for reports from the United State consuls in all parts of the world showing stocks of cottonseed products and stocks of oil-bearing seeds and commodities competing with cottonseed products in the various countries to which these consuls were accredited. In addition to this the consuls were requested to report on the consumption and uses of the products and the possibility of further increasing the sales.

These reports have been made, and published, daily, as received by the Department of Commerce and Labor, and were also published as a separate pamphlet last year and distributed at Jamestown. A second edition, including the first pamphlet and all consular reports received since its publication, was issued this year by the department under special authority and by special appropriation of Congress. These publications have been interesting and exceedingly valuable to every one engaged in the industry. They have not only shown what has been done, and what is being done, but what may be done to further increase our trade, and how to increase it. These reports have been mailed by the Department of Commerce and Labor to every member of our association, and they have contained abundant practical information. The manufacturers individually, and the association collectively, should take advantage of the opportunities thus presented.

In addition to the consular reports called for, Hon. Oscar S. Straus, Secretary of the Department of Commerce and Labor, last year appointed Mr. J. L. Benton as a special

foreign agent to travel in foreign countries and investigate conditions affecting our industry and to exploit our products. Mr. Benton discharged these duties with admirable fidelity and unusual ability, but owing to ill health was compelled to resign the position. Subsequently, on the nomination of our association held in New Orleans in September, 1907, Mr. A. G. Perkins was appointed to succeed Mr. Benton, and he has already submitted some very valuable reports, and as he acquires experience and a fuller knowledge of the conditions in the countries visited he will be of even greater service to the industry.

The members of this association should co-operate fully with the Department of Commerce and Labor and the Bureau of Manufactures and sustain Mr. Perkins in his work by every means in their power, but especially should they encourage him by letters of commendation and by suggestions that will help him to produce practical and satisfactory results.

The association is greatly indebted to Hon. Oscar S. Straus, Secretary of the Department of Commerce and Labor, and to Hon. John M. Carson, chief of the Bureau of Manufactures in that department, for the great interest they have shown in our industry and for the practical services they have rendered, and suitable resolutions to that effect should be adopted at this meeting.

With the work now being done to advance and maintain our foreign trade by the government, by its consuls and special agents, and with the splendid advertising by our publicity bureau and by the State bureaus, we can expect

within a reasonable time a considerably increased demand for all of our products.

Hon. John M. Carson, of the Bureau of Manufactures, Department of Commerce and Labor, has furnished me statements of the total exports of cottonseed products for the years ending March 1907 and 1908, as follows:

Domestic Exports of Cottonseed Products from the United States During the Twelve Months Ending March 31, 1907 and 1908, Respectively.

EXPORTS OF COTTONSEED PRODUCTS, YEARS 1907-1908.

	1907	
	Pounds.	Value.
Cottonseed oil, gallons.....	41,350,396	\$15,724,580
Cottonseed oil cake and meal...1,196,319,442		15,403,858
Lard compounds and substitutes	78,533,955	5,703,672
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Total	\$36,832,110
	1908	
	Pounds.	Value.
Cottonseed oil, gallons.....	39,742,710	\$17,619,241
Cottonseed oil cake and meal...1,060,291,437		13,367,748
Lard compounds and substitutes	75,228,754	6,147,713
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Totals	\$37,134,702

This shows total value of exports last year \$36,832,110, against \$37,134,702 this year, exclusive of linters.

Consul-General Hugh Pitcairn, of Hamburg, reported on December 23, 1907, that "owing to the scarcity and high value of cottonseed oil, churners resorted to experiments

which greatly hurt butterine consumption, increasing the popularity of another product, viz., cocoanut butter, which in many sections of the country has almost entirely replaced butterine so far as the lard requirements of bakers and confectioners are concerned."

It is probably true that the high prices of cottonseed oil in European markets, together with the financial stringency of the times, is one of the chief causes of the slight decline in the total amount exported. It is also doubtless true that the domestic consumption of oil has greatly increased the demand for the pure oil and compounds made from it, such as lard substitutes and oleomargarine, which reduced the quantity available for export.

COMPLAINTS BY IMPORTERS.

In his able address to the association at Jamestown last year Major John M. Carson, chief of the Bureau of Manufactures, Department of Commerce and Labor, said: "The principles that underlie successful trade are fundamental, and the law that directs it, although unwritten, is universal. Strict integrity is just as essential in the Orient as in the Occident."

This sentiment is fully indorsed by this association, and in order that our trade may not suffer by reason of any departure from it we should carefully and thoroughly investigate any complaints coming from any customer, foreign or domestic, against any member of this association. The high reputation for personal and business integrity enjoyed by the members of this association must be maintained.

Consul Robert J. Thompson, in a report to the government from Hanover, Germany, says: "The moral status of the cottonseed meal and oil trade does not seem to be in a condition satisfactory to the German importer. There is a general complaint against the irresponsibility of the brokers of certain of the Southern cities. Charges of bad faith and failure to fill contracts are freely made and claims of inability to collect judgments against the American exporter granted under contract by the arbitration board of the Hamburg Association of Feed Merchants are cited by old and established dealers. If this be true the remedy that would at once suggest itself would be the establishment of a penalty clause in the by-laws of the Cottonseed Crushers' Association involving the forfeiture of membership of mills or brokers shown to have violated articles of agreement or contracts with foreign purchasers, and particularly so with the foreign purchaser, because of his fear of expense and uncertainty in instituting legal proceedings to recover losses in a foreign state and his lack of facilities for the collection of debts or judgments. The maintenance of confidence in foreign trade is one of the greatest essentials and if the clean and honorable development of a great and growing industry can be furthered by the excision and sacrifice of harmful elements organized provision should be thus made by the cottonseed interests to protect and promote the trade."

We do not know that there is any just cause for the complaints reported by Consul Thompson, but they should be investigated either by the committee on appeals and grievances or a special committee appointed for that purpose,

and the characters of the parties against whom the complaints or charges are made vindicated, or the facts established and the penalty enforced. We cannot permit an indictment like that made by the German importers to pass without notice.

I have requested Special Agent Perkins to urge all reputable foreign dealers in our products to become members of this association, in order that any grievances they may have may be brought before this body for correction, and I am glad to say that several have already sent in their applications for membership, and it is probable that others will do likewise at an early date.

THE HANDLING OF COTTONSEED PRODUCTS BY OCEAN STEAMSHIP LINES AND IN FOREIGN PORTS.

You are familiar with the various reports that have been made by the special foreign agents on the handling of cottonseed products by ocean steamship lines and in foreign ports. The report of Special Agent J. L. Benton covering this subject, published by the Department of Commerce and Labor Bureau of Manufactures, impressed the executive committee with the necessity for prompt and vigorous action.

The president, with the authority of the executive committee, called a special meeting of the association to consider the matter, and this was held in New Orleans, September 23, 1907. Representatives of ocean steamship lines were present and the subject fully and exhaustively discussed between them and our members. The result of the meeting was the appointment of committees from this asso-

ciation to confer with the representatives of the ocean steamship lines at New Orleans, Galveston and other ports, with a view to bringing about improvements in the shipment of cottonseed products by ocean lines, and in the discharge of these products by the ships in foreign ports.

The reports of these various committees will be submitted to you at this meeting for your consideration. It appears therefrom that the mills are to blame in part for the bad conditions existing, in that they do not put up their products in proper packages. It will also appear, however, that the steamship lines do not exercise the care in the handling of these products, both in the loading and unloading, that their value and the freight paid justifies, and from a recent report of the special agent of the government, Mr. Albert G. Perkins, it is evident that conditions on the other side have not improved, and that the handling of cottonseed meal, especially, continues to be very badly done, to the great injury and damage of the product. This report of Mr. Perkins has doubtless been read by every member of this association.

Possibly those mills which do not themselves export oil or meal, do not fully realize their own interest in the question. Our domestic market depends in a large measure on the foreign markets, and, therefore, every mill manufacturing oil or meal is interested in keeping the foreign markets in the best possible condition. To do this the association must put its powerful influence behind this movement and every member must feel a personal interest in the result. The government agents have shown us one of the causes of the heavy losses in our business. The

duty and the responsibility to correct this condition is on us.

I advise that standing committees be created at each of the ports where cottonseed products are exported in sufficient quantity to justify it; that these committees continue to press the matter on the transportation companies, and that they co-operate with the special government agents abroad and with the mills at home to the end that the present wasteful methods may be abolished.

Direct trade with Europe has always been the dream of the South. The great industry we represent will contribute much toward the realization of that dream if its interests are fairly and justly treated.

IMPROVED CONDITIONS IN FOREIGN MARKETS.

Cottonseed oil has found a ready market in all European countries. Naturally, it was first introduced into those countries where the people were accustomed to the use of vegetable oils. Having been considered alongside of olive and all other vegetable oils, its usage became general. In fact, its adoption was so universal that the producers of other oils, disturbed over its popularity, succeeded in having some of their governments enact tariff laws to prevent cotton oil competition. But the fact is being generally recognized that the producers of other oils cannot supply the demand, and a more conservative feeling in regard to the tariff now prevails.

Spain and Austria alone now have tariffs that are practically prohibitive, and a modification of these tariffs may be expected. This is especially true of the Austrian laws.

Owing to the great development of the oleomargarine industry, efforts have been made, and are now being made, by the State Department at Washington to bring about a reduction of the Austrian tariff, and this is also being urged by the Austrian manufacturers of lard and butter substitutes, who recognize that their trade by the imposition of the high tariffs has been injured. The Austrian Economical Society has also taken up the matter as shown in a recent report of United States Consul McFarland: "Meetings are being held and pressure being brought to bear upon the government to secure a reduction of the present rates."

During the year our government succeeded, through the work of the American Embassy at Constantinople, in removing all restrictions on the sale of cottonseed oil in the Ottoman Empire, and sales were almost immediately made, the contracts for forward oil amounting, according to the report of Consul-General Ozmun, to one thousand barrels monthly. The consul adds that "this opens up an inviting field to American producers."

In January Hon. Elihu Root, Secretary of the Department of State at Washington, completed an agreement with the French ambassador to America by which the minimum duty on cottonseed oil was retained by France. This was a distinct victory for our industry, as the maximum rate had been threatened.

In other European countries the tariffs are not burdensome, and are not likely to affect our exports.

In South America all the conditions favor cotton oil, at least in such countries where we are likely to do business.

Consul-General Anderson says of these markets that "the market is growing rapidly and promises much." "As between olive oil and cottonseed oil," he says, "conditions generally, including tariff rates, are decidedly in favor of cottonseed oil."

So far, therefore, as the present foreign tariffs are concerned, conditions are favorable to our product, except in Spain and Austria, and the latter will no doubt soon find it necessary to modify her laws.

RECIPROCITY.

In January last, Mr. Alvin H. Sanders, chairman of the American Reciprocal Tariff League, advised us that a meeting would be held in Washington on February 3, representing the National Manufacturers' Association, the National Grange, Chicago Board of Trade and other commercial organizations, and extended an invitation to our association to send a representative. This invitation was submitted to the members of the executive committee, who favored its acceptance, and Mr. T. S. Young, of New York, was appointed a delegate. He will submit his report to this meeting.

In this connection and bearing on this subject, I wish to call your attention to the foreign tariffs on cottonseed oil and to the American duties on oils of various kinds under the United States tariff laws. Without going too much into details it is sufficient to state that many of the countries of Europe levy tariffs against cottonseed oil, while we levy similar tariffs on other vegetable oils imported into this country. The American tariff on olive oil not spe-

cially provided for is 40 cents per gallon, and on olive oil in bottles, jars, etc., is 50 cents per gallon. Practically all of the other vegetable oils are taxed by our government to some extent, while our product suffers similarly in some other countries.

In advising me of the agreement between the United States and France by which the minimum duties on cottonseed oil were retained in France, Secretary Root says: "I take this occasion to call your attention to the importance to American trade of our having a maximum and minimum tariff so that we can make it an object for other countries to give us their lowest rates. Under our present single tariff system we are obliged, practically, to trade with other countries alike, no matter how they trade with us."

You are familiar, of course, with the recent message of President Roosevelt urging tariff revision. This matter has also been vigorously pushed by the National Association of Manufacturers and our co-operation requested. I will present to the meeting some recent communications from this association on the subject for your consideration.

In view of the large trade that our industry enjoys with foreign countries, this matter should have most serious consideration, and I think should be handled by our legislative committee between the sessions of our association.

OUR FOREIGN TRADE AND GOVERNMENT OFFICIALS.

King Edward of England is called the great commercial drummer of Europe. His principal rival in this field is Emperor William of Germany. While the heads of these powerful governments are vigorously pushing the commer-

cial interests of their respective countries it is exceedingly fortunate for us that our government has among its high officials men capable of competing with them for the world's trade.

In his trip through South America Secretary of State Root justly earned for himself the honored title of the great commercial drummer of America. His public speeches on that trip should be read by every American manufacturer and exporter.

The Secretary of the Department of Commerce and Labor, Hon. Oscar S. Straus, is pre-eminently a business man and fully understands the importance of encouraging and advancing American commercial interests. In the organization of the National Council of Commerce and in the investigations which he has caused to be made in foreign markets of conditions affecting American products he has shown a realization of trade conditions that demonstrates his perfect fitness for the great business position which he holds.

If American manufacturers will follow up the way pointed out by Secretaries Root and Straus, they will find markets for their products at prices sufficiently remunerative to take their surplus and will aid greatly in the removal of all signs of industrial depression or financial stringency. We are deeply interested in all that the heads of these two departments are doing to promote our foreign trade. If we will take advantage of the vast amount of information they have published on this subject we will realize increased profits and a more satisfactory business.

COMMITTEE ON FOREIGN TRADE.

The vast amount of information collected by the Department of Commerce and Labor through its consular reports, and through the reports of its special agents regarding foreign commerce dealing with cottonseed products should be properly utilized in order that we may get the full benefit of it at the time it is of the greatest value.

I therefore recommend that a committee on foreign trade in cottonseed products be created. The duty of this committee should be to keep in close touch with the foreign trade and market conditions through the Department of Commerce and Labor and the special foreign agents and consuls of the United States, and should keep the members of the association informed through the bulletins of the publicity bureau, and more promptly by other means when they think advisable, and confidentially to the members only if they think this best. The committee could handle all inquiries from foreign dealers and could often put a prospective purchaser in touch with a manufacturer and thus increase the demand for the products.

The committee would also, in connection with the legislative committee, keep thoroughly posted regarding the tariff laws of all countries affecting cottonseed products.

The committee, co-operating with the port committees, would further keep advised of the conditions affecting transportation of cottonseed products to foreign markets, the terms offered by ocean lines and show, so far as consistent advantages of shipments through American ports offering the greatest inducement.

It is a waste of energy and of our resources to continue to allow our products to be handled as ballast, with the consequent loss, while we pay high ocean rates on it.

THE BELGIAN CONSUL-GENERAL.

During the year the Belgian consul-general, Hon. Paul Hagemans, made a trip through the South. While in that section he devoted considerable time to the study of cottonseed products. Belgium does a very large business in these products with the United States, and it is hoped that the result of Hon. Paul Hagemans' visit will be to largely increase this business.

INDUSTRIAL EXPOSITIONS.

Expositions of both general and special character are held in some of the European countries almost every year, and it would be of great benefit to our industry to have complete exhibits of cottonseed products at many of them.

In his annual report for 1907, Hon. John M. Carson, chief of the Bureau of Manufactures, Department of Commerce and Labor, calls attention to these expositions and advises that the national government should accept invitations frequently extended to our country by foreign countries to participate in them, and encourage industrial organizations to make exhibits of their products under the patronage and protection of the national government. He further suggests that the various State governments might make special appropriations to assist industrial enterprises in making such displays of the products of their States.

I would recommend that our publicity committee be

requested and authorized to act with our executive committee in giving special attention to this matter, and be directed to co-operate with Hon. John M. Carson in arranging for participation in such expositions wherever practicable, and when such work promises adequate returns that other organizations be requested to join with us, and that the various State legislatures be petitioned to make sufficient appropriations to cover the necessary expenses. It can be justly urged that any benefit derived by our industry from such an expenditure of public money would likewise be of great and permanent value to other interests, and especially to growers of cotton in the South, inasmuch as an increased demand for cottonseed products would add immediately and permanently to the value of the cotton crop.

OLEOMARGARINE.

There is now pending in the United States Senate, Senate Bill No. 3152, introduced by Senator Penrose, which I understand if passed, would absolutely prohibit the manufacture of oleomargarine in the United States. There is also pending in the House, House Bill No. 557, introduced by Mr. Caulfield, a bill which I am informed would repeal all laws regarding the manufacture and sale of oleomargarine in the United States except, of course, the national pure food laws.

We are interested in the manufacture of oleomargarine, at least to the extent of the amount of cotton oil used in this product and, further to the extent that its manufacture may become of benefit to Southern dairymen. In European

countries cotton oil is extensively used in its manufacture, and its use for this purpose forms a very large part of the foreign demand for cotton oil.

Oleomargarine is a sweet, pure, wholesome edible product and is sold, I understand, in this country in full compliance with the pure food laws, both national and State, which are sometimes almost prohibitive in their provisions. The production of butter in both this country and Europe falls far short of the demand. It was stated recently in the London *Daily Mail* that the supply of butter had fallen below the demand for many years, and had actually reached the proportions of a famine in different parts of England.

Without substitutes for butter the poorer people especially will be deprived of this absolutely necessary article of food. Oleomargarine has proven a satisfactory substitute. There seems to be no good reason why laws discriminating against its manufacture in favor of other products should be enacted, yet both national and many of the State governments have put restrictive laws on their statute books.

The New York Appellate Division of the Supreme Court recently decided the oleomargarine law of that State unconstitutional in an important respect. The court held that constitutional principles were violated by the enactment, "which absolutely prohibited an important branch of industry for the sole reason that it competes with another and may reduce the price of an article of food for the human race."

This matter is brought to your attention at the request of

several members so that it may receive such consideration by you as you may decide it deserves. In order that it may be intelligently discussed I have, after consultation with our executive committee, extended invitations to the oleomargarine manufacturers to send representatives to this meeting, and several of them have responded. On behalf of the association I take pleasure in welcoming them here and in offering to them the usual courtesies of the occasion.

Mr. J. J. Culbertson, of Texas, a member of this association, has consented to deliver an address on this subject during this meeting.

DISCUSSING THE PRICE OF COTTONSEED.

At the special meeting held in New Orleans in September, 1907, an invitation was extended to us by Hon. Harvie Jordan, president of the Southern Cotton Growers' Association, to appoint delegates to meet a delegation from his association to discuss with them the price of seed, with a view, if possible, of establishing some staple price. The delegates were appointed under resolution adopted by you with instructions to discuss the value of seed, but under no circumstances to enter into a discussion of price.

The meeting was held and the report on the result will be submitted to this convention by Mr. M. S. Harper, president of the Georgia Cottonseed Crushers' Association, one of our representatives at the joint meeting.

Our association is unique among commercial and industrial organizations in that it has never sought to fix prices on the raw materials, the supplies its members purchase,

nor on the products they manufacture. On the contrary, at its New Orleans meeting in September, 1907, the association placed itself on record against such practices, and it is not likely that its policy will ever be changed in this respect, but other associations holding different views have adopted a different course. The executive committees representing the Cotton Growers' Association and the Na-



Heart of the American Sardine Packing Industry, Where Cotton Oil Is Used in Packing Fish.

tional Farmers' Union have attempted to fix prices on cottonseed, frequently naming a price without proper regard to the value of products and without giving due consideration to other conditions. Often the price proposed for seed has been beyond the ability of the mills to pay and in excess of the value of the seed to the growers themselves.

The high prices recently paid for seed by the mills will be hard to maintain under any circumstances, but the

farmers may do much in that direction by more generally using cottonseed products in their homes and on their farms, instead of using competing articles. There is no better, more wholesome or more economical cooking fat than cottonseed oil, yet the growers of cottonseed continue to some extent to buy other articles for cooking purposes inferior to cotton oil and competing with it.

Cottonseed meal stands at the head of American feeding materials in the percentage of fat and protein, the materials most needed for stock feed, and yet in many sections growers of seed import other feeding material not so valuable as cottonseed meal and pay higher prices for it. Likewise the growers of seed import hay and roughage for stock feed and pay from three to four times as much for it as they do for cottonseed hulls, equally as valuable if not superior to the articles imported.

Cottonseed meal contains a high percentage of ammonia. No material, properly mixed with phosphoric acid and potash, makes a better commercial fertilizer for Southern soils and Southern crops, yet growers of cottonseed go on using other sources of ammonia in their fertilizers, paying as high or higher prices for it, thus creating and supporting competition against their own and the interests of the oil mills.

Co-operation between the farmers and the mills is most desirable, in their mutual interest, so far as it can be had in legitimate trading. Much has been done to bring this about by the interstate and State publicity bureaus of the crushers' associations, and much more can and will be done

in the educational work in which those bureaus are now working.

GRADING COTTONSEED.

At our last annual convention at Jamestown resolutions were adopted, unanimously, calling attention to the preservation and better care of cottonseed and recommending that the members of this association in each State urge upon their legislatures such enactments as will fully protect the buyers of seed by requiring sellers to deliver such goods as they guarantee. It was further directed that a committee be appointed in each State from the members of this association for the purpose of carrying out the recommendation.

These committees were appointed by the president, and considerable correspondence resulted. For various reasons the matter was not pressed in any of the States, but the committees appointed at that time will submit the reports required during this session and such further action taken as the association thinks proper.

THE EXECUTIVE COMMITTEES.

Your executive committees have worked unceasingly for the good of the association. Without such work nothing could have been accomplished. It is a great pleasure also to add that the individual members have promptly responded to every call on them where the association's work has been concerned.

The good resulting from such cordial co-operation between officers and members was recently demonstrated in one particular matter pending before Congress in which

our industry was deeply interested. Acting together they were able to show to the members of Congress the necessity for the continued appropriation of funds to carry on investigations regarding our products in foreign markets and to aid in securing favorable action thereon. It also demonstrated the influence of your association and the importance of your products. This is only one of many similar instances that have occurred during the year.

In discharging the duties assigned to me I have had the active assistance of the executive committee, without which any efforts on my part to promote your interests would have resulted in failure.

RULES.

At your last annual meeting the by-laws were so amended as to require the committee on rules to meet in advance of the regular annual meeting of the association and prepare such amendments to the rules as might be presented and approved, and to print and distribute to the members such changes in the rules as the committee recommended.

In accordance therewith the committee met at New Orleans, La., on March 24, 1908, and discussed all amendments proposed. Their report was printed and distributed to our members. This report has now been in the hands of the members about two weeks, and will also be submitted to this meeting for your consideration and such action as the meeting may see proper to take.

The committee carefully considered every change suggested and worked hard, intelligently and unselfishly to perfect the rules and adapt them to every condition affect-

ing the trade in cottonseed products. I hope their recommendations will receive your approval.

FINANCIAL.

The annual report of the secretary and treasurer furnishes the details of receipts and disbursements. The year has been an unusually busy one for the association, involving unusual expense. The special meeting of the association held in New Orleans in September, the extra meeting of the rules committee at New Orleans in March, the several extra meetings of the executive committee at Memphis and New Orleans, the litigation over the tariff on press cloth, were all the result of conditions arising out of the growing importance of the association's work.

The bureau of publicity has also done much more work than heretofore, including an increase in its publications, the expense being necessarily larger. While the receipts have practically all been expended the association closes the year out of debt and with probable income sufficient for the ensuing year to meet all current expenses.

THE SECRETARY.

The annual report of the secretary and treasurer, Major Robert Gibson, will be submitted as usual. I wish to add my testimony to that of all the presidents who have preceded me regarding Major Gibson's absolute faithfulness and loyalty. He has served you since the organization of your association. If he thinks about anything else on earth, besides his own family, or if he loves anything in the world better than your work, I have not discovered it after

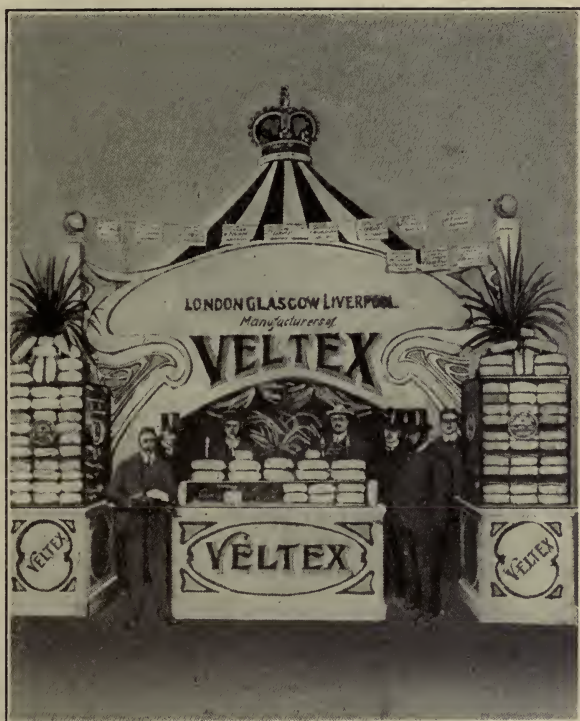
about three years of close personal contact with him. Other members of your association have served you with fidelity and interest, but they did sometimes think of something else besides the association's work, while his mind never wanders to any other subject. I believe if you should wake him up at midnight or drag him drowning from the bottom of the Mississippi River, he would ask you for your dues. His report is comprehensive, but if it fails to give you any information that you want, search him and I will guarantee that you will find it in his pocket or in his head.

PUBLICITY BUREAU.

I ask your most careful attention to the annual report of the publicity bureau. Crude mill managers individually, as a rule, formerly made very little effort to increase the value of the products, and the refiners were often too well satisfied to allow the refined products to be used as adulterants. The creation of the publicity bureau has caused some changes in this respect. This work has brought together in closer relationship the refiners and the producers of crude oil. Its work has shown the mills that none of the products have brought their value in comparison with the commodities with which they compete, and this has resulted in promoting new markets and new uses, and, consequently, increased values. The refiners have also more fully realized this, and together with the crude mills have given a more permanent value to the products.

It is, therefore, surprising that the financial support given the bureau should be so far less than it requires. This must be due to the fact that the good which has

already been accomplished, and the opportunities for still greater results, are not fully understood by the association. Up to the time of the establishment of the bureau practically all of the advertising of oil and the products of oil



An English Exhibit of Cotton Oil and Hogless Lard. Confectioners' Exhibition, London.

had been done by the refiners. The rapid increase in the number of crude mills and the consequent increased production of crude oil made it necessary to create a demand sufficient to meet the increased production of the oil, as well as the higher price of the raw material.

The creation of the bureau of publicity was an offer on the part of the crude mills to contribute their share of the necessary advertising expenses and to co-operate with the refiners in further exploiting cottonseed products. Some of the refiners declined this offer and withdrew from the association. Other refiners have given only lukewarm approval to the movement, while others, more in sympathy with it, have been more generous in their support. The splendid results that might be accomplished by co-operation between the refiners and the mills does not seem to be fully appreciated.

The work accomplished by the bureau this year is fully set forth in the report of the committee, and should be gratifying to the association. The committee has performed its duty fully, and the advertising which it has given cottonseed products is of the highest character. Its publications have been models of excellence.

While the opportunities before the publicity bureau, with proper support, are unlimited, there is much, very much, that individual millers can do on their own account and in their own towns by co-operating with the bureau in making better home markets. This is too often neglected. If every manager and every employe would use the products himself and talk about them more, advertise in his local papers, show to regular customers and to possible customers their value and how to use them, he would be of benefit to the mills and to the purchaser and to the community and would accomplish surprising results. With the publicity bureau back of him to furnish the literature

needed, he would find the work not only pleasant and profitable, but intensely interesting.

The convention should determine what amount is needed to sustain the bureau of publicity, and so provide for it in a practical and definite way.

EXHIBITION OF COTTONSEED PRODUCTS.

There is no Southern industry that has been more beneficial to the country than the manufacture of cottonseed products.

It has established a permanent value for cottonseed, adding thereby over sixty million dollars to the value of the cotton crop annually, even if only sixty per cent. of the seed are crushed.

It has caused the investment in the South alone of approximately seventy-five million dollars, giving employment to over twenty-five thousand people. It has increased the export trade of the United States by between thirty-five and forty million dollars annually. Oil, its most valuable product, has partly supplied the shortage in olive and other vegetable oils in Europe, created by the increasing population of the old world. It has successfully entered into the manufacture of oleomargarine, butterine and other similar substitutes in Europe and America, thus furnishing wholesome products in many sections where butter has become almost unknown. Lard substitutes made with it have largely supplanted hogs' lard and almost made the South independent of this Western product.

Its by-products have made dairying and cattle-raising in the South possible and profitable, and, in addition, an-

nually supplies to European stockfeeders and dairymen about six hundred thousand tons of cottonseed meal and cake, the richest and best-known stock feed ever produced.

In time it will create great packing-houses in the South. It has enriched the soil and restored abandoned lands to their original fertility, greatly increasing the yields of all crops.

So far as the United States is concerned, the crushing of seed is, and must necessarily remain, a Southern monopoly. Mills are operated in England, Germany, China, India and South America, but nowhere are the products of these equal in quality, or even approximately so, to those produced in the Southern States from seed gathered fresh from the fields.

If this meeting would appoint a committee to take charge of an exposition illustrating these facts, to be held in some central city of the South offering the greatest inducement, either through municipal guarantees or through commercial or business organizations, I feel sure that the necessary amount to cover the expenses of such an exhibit would be raised, and the most unique, the most interesting and the most useful, practical display would be made that has ever been gathered together in the South. If the next annual meetings of the interstate and all the separate State organizations were held in the city selected for this purpose at the same time, and if possible arrangements made for the dairy and stock associations to participate in the meetings and the exhibit, and similar arrangements made with the manufacturers of all mill machinery, such a meeting would bring together the largest industrial convention

ever held in the South. The city entertaining the convention would derive immense benefit from it. The practical result to our interests would be of incalculable value.

If individual exhibits were made by the manufacturers of refinery products and the crude mills, the expense involved would be small compared to the results, and the association itself would be called on for an insignificant part of the expenses needed, particularly if the city selected for the exhibit should contribute liberally for the purpose.

I submit the matter to your consideration, and if you think the suggestion practicable would advise that a committee be appointed from among your members to co-operate with committees from stock, dairy and machinery associations throughout the country, and endeavor to arrange for such an exhibition, the details to be worked out by these committees.

ADVERTISING.

We are frequently called on by parties in foreign countries, as well as by our own people, for information regarding our products. At no time in the history of our industry has there been more public interest in these products than at present. We should cultivate this condition. Our interstate publicity bureau and the various State bureaus have done splendid work in this direction, especially within the last year, and in addition to this our association should prepare and publish pamphlets in convenient form to answer special inquiries. I have just received an inquiry through Special Agent Perkins from the German Agricultural Society, an organization of German farmers with a

membership of 16,000, publishing a weekly bulletin, asking for information regarding the feeding value of cottonseed meal. We should be able to answer this with printed matter in concise, and yet complete, shape; it should give scientific as well as practical values. I suggest that the publicity committee be requested to prepare a pamphlet that will meet this condition.

During the year Dr. A. M. Soule, dean of the Agricultural College of Georgia, carried a train through that State with exhibits of articles of interest to the farmers, accompanied by lecturers able to explain the exhibits. Through the courtesy of Dr. Soule the manufacturers of cottonseed products were allowed to arrange in their exhibit car a full line of cottonseed products and to send a man with the exhibit to explain it. The result has been most encouraging, and if followed in other States will prove of great benefit to our millers.

The opportunities for advertising are unlimited, and if we did more of it through the trade journals and the newspapers the demand for these products would immensely increase.

TRADE JOURNALS.

What some one has called "hypnotism of the types" has been realized by our association. Owing its origin to a member of the press, it has received from the beginning the highest consideration of the trade journals, without whose assistance its success could not have been attained.

The talented editors of these papers, inspired by high motives of public good, have, by their encouragement, their

timely advice, their support of every movement for the good of the business, greatly assisted in promoting this work, and, in addition to their editorials, have freely used the columns of their papers, without charge, to exploit and advertise cottonseed products.

Their good influence has been far-reaching, and we owe them a debt that cannot be cancelled entirely by resolution; we should express our obligation and our gratitude in the usual manner, and thus show them that their brilliant work for us has been appreciated.

But we should always remember that some substantial recognition is just as essential to their business as to ours. In many parts of the country the daily press has also shown our interests unusual consideration, and, while this has been done without hope of reward other than a recognition of the great public service rendered, we should, wherever possible, remember them when we are passing around the possible, remember them when we are passing around the small, and the fishes should be whales, not minnows.

OUR ASSOCIATES.

Our friends who have laid aside their own important business affairs to accept our invitation to address this convention and to participate in its deliberations and discussions will receive your most courteous attention. They come at our request to give us the benefit of their experience in the use of our products and to advise with us on other matters in which we are interested. Such encouragement and assistance will be greatly appreciated by you and will

facilitate the further development of our industry, and we will profit by their presence.

In your name I extend to them a most cordial welcome to our meeting and thank them for the sacrifice they have made in our interest.

IN MEMORIAM.

It is well that we should pause in the pursuit of business to pay proper respect to the memories of those of our members who during the year have "crossed over the river," to recall their services, to praise their virtues and to express our obligations to them for what they have taught us by precept and example. Since our last meeting we have lost from our membership by death Major Robert A. Allison, of Winona, Miss.; Mr. C. S. McCullough, of Darlington, S. C., and Mr. J. S. Armstrong, of Dallas, Texas. They were all prominent in our association, contributed liberally of their means, time and talent to its work and to the development of the industry it represents.

It is fitting that the association should recognize this by suitable records on the minutes and in the reports of its proceedings. Knowing that this will be indorsed by you I have appointed committees from among the friends of each of our deceased members and requested them to present suitable resolutions to this convention expressive of the sentiments of this association on the losses its members have sustained.

CONCLUSION.

Gentlemen of the convention, you represent one of the

world's youngest, greatest and most beneficial industries. Its great interest commands your earnest and most careful attention.

You will have before you at this meeting the consideration of questions involving the continued growth and prosperity of your industry; its future is largely in your keeping; much depends on what you do during the next few days; upon your actions may hang future success or failure. From no other source can or will these interests be so well guarded. I believe that here on the banks of the Ohio, the line that formerly divided the people of this great country in strife, now a band that binds us together in mutual friendship and interest—in this great city of Louisville, famous in song and story, you will be inspired to still greater efforts to promote the good of your own great industry, and when you have returned to your homes and resumed your usual occupations, you will realize and appreciate the benefits you have derived from your attendance here. In the conduct of your business at home you will need the patience of Job and the righteousness of Abraham, but if you will be both patient and righteous, you will, at our next annual convention, be able to rejoice over your complete success and to congratulate yourselves on the good that you have done, not only for yourselves and your stockholders, but for the country at large.

I need not say in conclusion that it has been the greatest pleasure and the greatest honor of my business life to have served you in the high position to which, by your partiality, you elected me. I have watched with the greatest interest and satisfaction the wonderful development of the indus-

try. It has grown in a short while, as measured by trade developments, from a few scattered mills on the Mississippi and in the Piedmont region of the Carolinas, to that of a great manufacturing industry, conferring benefits on our people, receiving indorsement and encouragement of the national government, creating other industries, and winning the world's recognition of its products. But there yet remains much to be done before its full development is reached. That this will be accomplished and that every obstacle to our trade will be removed will not be doubted by any one familiar with the energy, ability, honesty and loyalty of the members of our association.

CHAPTER X.

A MODEST LITTLE STORY OF A BIG LITTLE SEED.

A SHORT SKETCH OF THE EARLY HISTORY OF COTTON OIL—
PURITY OF THE PRODUCT—ITS VARIOUS USES—ITS BENE-
FITS TO THE SOUTHERN COTTON GROWER.

It is said that story is simply an abbreviation of his-story, and, therefore, a story well told contains as many facts as history. In the following little story, of great achievements from humble beginnings, everything will be facts except where the reverse can be inferred :

Tradition tells us that on the site of ancient Athens, where opposing forces struggled for supremacy, a seed dropped from Heaven between the rocks and sprouted, from which sprang a wonderful plant, and so long as it was cultivated agriculture in that country flourished. It has always been supposed that this was an olive, because it is an oil-bearing fruit and because oil has always been considered an emblem of plenty.

Two thousand years ago the Chinese are said to have expressed oil from the cottonseed, and to have appreciated its merits. Nearly two thousand years later the southern part of the United States realized the value of cottonseed for its oil-bearing properties, and in a small way expressed the oil, and shipped it to foreign countries. At first it reached those markets in such small quantities that it was difficult to find buyers for it, and it was used for whatever

purpose the purchaser desired it, principally in the soap kettle. As larger quantities crossed the waters, the manufacturers of olive oil had it brought to their attention, and investigation showed that it ranked with the highest grade of olive and other similar oils. It soon came back to this country masquerading under foreign titles, and dressed out in foreign garbs. So long as it associated only with the aristocratic olive, and was in such good company, no further efforts to exploit its virtues were made by the manufacturers, until the production reached a point where larger markets were needed. It then found its way to the Western packers, and they were shrewd enough to realize its value to them, as it was cheaper than lard oil. The purity of cottonseed oil was such that it finally went into the market under its own merits, asserted itself under its own name, and declared its independence, and has since been recognized as the best, the purest and most wholesome product in any part of the world.

A tourist asked a citizen, "What is cottonseed oil?" and the citizen answered, "Oil made from cottonseed," and thought he had told him all there was to be told.

A primrose by the river's brim,
A yellow primrose was, to him,
And nothing more.

If the question had been asked of any well-informed person, the inquirer would have been told a great many other things. He would have been informed that the manufacture of cottonseed oil has contributed enormously to

the wealth of the South, has established a business giving employment to thousands of people, and added millions to the export trade of this country. He would also have been told that if each inhabitant in the State of Georgia would use cottonseed oil in the place of lard and butter, all of the oil produced in Georgia would be used in the State, and in doing this the increase in the market price of the oil would be sufficient to increase the value of cottonseed probably one million dollars, which would go directly to the farmers of Georgia, and that if the oil was used in the same proportions throughout the South for a few years, its enhanced value would make the seed as valuable as the lint, and the health of the people would be greatly improved. With these benefits and advantages to the South, the inquirer would naturally ask why the people of this State do not use cottonseed oil more extensively for salads and cooking. The answer would be that its value has not been fully appreciated.

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